

# HELMINTHOLOGICAL ABSTRACTS

*incorporating*  
BIBLIOGRAPHY OF HELMINTHOLOGY  
For the Year 1940.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY  
(HELMINTHOLOGY)

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Vol. IX, Part 5.

## 369—Acta Medica Philippina.

- a. CHIKIAMCO, P. S. & ORQUIZA, C. T., 1940.—“Roentgen diagnosis of ascaris in the gastrointestinal tract.” 2 (1), 15-20.

## 370—Acta Medica Scandinavica.

- a. BONSDORFF, B. VON, 1940.—“The inhibitory effect of *Diphyllobothrium latum* on the proteolytic activity in vitro of depepsinized human gastric juice. *Diphyllobothrium latum* and pernicious anemia III.” 105 (5/6), 502-515.  
b. BONSDORFF, B. VON, 1940.—“On the reticulocyte response and course of remission after the removal of the worm in patients with *Diphyllobothrium latum* and pernicious anemia. *Diphyllobothrium latum* and pernicious anemia IV.” 105 (5/6), 516-539.  
c. BONSDORFF, B. VON, 1940.—“On the proteolytic activity in vitro at neutral reaction of gastric juice from patients with cryptogenetic pernicious anemia and with pernicious anemia due to *Diphyllobothrium latum*. *Diphyllobothrium latum* and pernicious anemia V.” 105 (5/6), 540-557.

(370a) Bonsdorff found that fresh or dried *Diphyllobothrium latum* inhibited the digestion of casein by depepsinized human gastric juice. The anti-protease effect was strongest between pH 6 and pH 9. The inhibitory substance was destroyed by heating at 80° C. for 20 minutes. It was insoluble in ether and 96% ethyl alcohol. It was not dialysable nor precipitated by 50% alcohol but it was quantitatively precipitated in 90% alcohol. The activity of aqueous extracts was independent of the pH (between pH 1.7 and pH 9.0) at which they were prepared.

W.P.R.

(370b) Bonsdorff has examined blood and gastric secretions (Ewald-Boa's test meal) from *Diphyllobothrium latum* carriers with pernicious anaemia. In 9 cases, removal of the parasite caused a definite reticulocyte response and blood regeneration. No anti-anaemic treatment was necessary. The typical pernicious anaemia marrow obtained by sternal puncture showed marked macro- and normoblastic regeneration 48 hours after the parasites were expelled. It is considered that the parasites caused the anaemia in these cases. In 5 other patients liver extract injections were necessary to cause a complete remission. The author is of the opinion that this group consisted of cases in which worm infestation was an incidental association with the anaemia. The amounts of gastric juice and free hydrochloric acid showed no obvious correlation with the intensity of blood regeneration after the removal of the parasites. W.P.R.

(370c) Bonsdorff found that a proteolytic enzyme, active at pH 7.4 (probably the “intrinsic factor” of pernicious anaemia) was present in the gastric juice of 7 patients with pernicious anaemia attributed to *Diphyllobothrium latum* as well as in 6 cases of uncomplicated cryptogenetic pernicious anaemia. Literature on the subject is reviewed. W.P.R.

## 371—Állatorvosi Lapok.

- \*a. VAJDA, T., 1940.—[A new method for concentrating fluke eggs.] 63 (22), 147-149.

(371a) In view of the present scarcity of water-glass, Vajda recommends using potassium carbonate solution to a specific gravity of 1.450 for the concentration of fluke eggs. [From an abstract in Berl. u. Münch. tierärztl. Wschr., 1941, p. 427.] B.G.P.

\* Titles so marked throughout this number have not been seen in the original.

## 372—American Fur Breeder.

- a. CHADDOCK, T. T., 1940.—“Diseases of mink.” 12 (10), 6-9; (11), 6-7, 10; (12), 18-19; 13 (1), 8-9.

(372a) In this account of the diseases of the mink which cause serious losses to the fur industry of the State of Wisconsin, the only helminth mentioned is *Dracunculus medinensis* of which a single case is recorded by Chaddock. A previous case in the mink has been reported by Benbrook in 1932. In 1936 it was also found in a ranch-bred mink in Iowa and a case had been observed in a house dog from South Dakota. R.T.L.

## 373—American Journal of Nursing.

- a. JACOBS, L., 1940.—“Hookworm disease.” 40 (11), 1191-1196.  
b. ROGERS, H. L., 1940.—“Nursing care in hookworm disease.” 40 (11), 1197-1200.

## 374—American Midland Naturalist.

- a. MORGAN, B. B. & WALLER, E. F., 1940.—“The occurrence of a rare filariid nematode from a crow.” 24 (2), 379-381.

(374a) Morgan & Waller record the presence of *Diplostriaena tricuspis* in *Corvus brachyrhynchos brachyrhynchos* in Iowa, a new host record, though it had previously been found in three other *Corvus* spp. Adults were recovered from the abdominal cavity of one bird and these are redescribed. P.A.C.

## 375—Anais da Faculdade de Medicina da Universidade de São Paulo.

- a. MEIRA, J. A. & JAMRA, M., 1940.—“Contribuição para o estudo da medula ossea na Schistosomiasis mansoni com algumas observações sobre o esplenograma.” 2, 599-643. [English summary pp. 640-642.]

## 376—Anales del Instituto de Biología.

- a. CABALLERO Y C., E., 1940.—“Tremátodos de las tortugas de México.” 11 (2), 559-572.

(376a) Caballero describes four species of trematodes from fresh-water turtles of Mexico; two of these are new. *Polystomoidella oblongum* is recorded for the first time from Mexico and a redescription is given of specimens from *Kinosternon integrum*; *P. whartoni* was also found and figured from *K. hirtipes*. Both these monogenetic trematodes were found in the urinary bladder. *Schizamphistomoides resupinatus* n. sp. was found in the large intestine of *Dermatemys mawii* together with *S. tabascensis*, and as the young forms of both were present a comparative description is given showing that the new species differs from the latter in several respects, e.g., the testes of *S. tabascensis* are oblique at all stages. *Cercorchis membranaceus* n. sp. is described from the small intestine of *Chrysemys ornata*. N.G.S.

## 377—Anales de la Sociedad Mexicana de Oftalmología y Oto-Rino-Laringología.

- \*a. BAUER, C., 1940.—“Un caso de cisticerco intraocular.” 15, 299-302.

## 378—Annaes da Academia Brasileira de Ciencias.

- a. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1940.—“Sur la position systématique de *Distoma arrectum* Molin, 1859.” 12 (4), 319-323.

(378a) Lent & Freitas consider a trematode recovered from *Lacerta vivipara*, which they describe fully and illustrate, to be identical with a specimen described by Molin in 1859 and identified by him as *Distoma arrectum* Dujardin, 1845. It is considered, however, that Molin's species is distinct from Dujardin's, and therefore that *Distoma arrectum* of Molin, 1859, is a homonym. Lent & Freitas propose the new name *Plagiorchis molini* nom. nov. for *D. arrectum* of Molin, 1859 (nec Dujardin, 1845). A.E.F.

## 379—Annales de l'École Supérieure de Médecine et de Pharmacie de l'Indochine.

- \*a. GALLIARD, H. & NGUYÊN-HUU-PHIEM, 1940.—“Les formes cliniques de la filariose urogénitale au Tonkin.” 4, 101-104.

## 380—Annotationes Zoologicae Japonenses.

- a. FUKUI, T. & INOUÉ, I., 1940.—“Über eine neue *Parachordodes*-Art aus der Mandschurei.” 19 (2), 89-91.

(380a) Fukui & Inoué describe and figure *Parachordodes orientalis* n. sp., from Manchuria. The description is made from one male specimen only, and the host is unknown. A.E.F.

## 381—Arbeiten aus dem Yüksek Ziraat Enstitüsü Ankara.

- a. AYGÜN, S. T. & BAŞKAYA, H., 1940.—“Kelebek hastalığı [Distomatose] mücadeleinde allergi reaksiyonu ile teşhis üzerinde araştırmalar ve elde edilen sonuçlar.” Heft 63, 12 pp. [In Turkish.]
- b. TUNKER, H. F., 1940.—“Ueber den Einfluss verschiedener Temperaturen und von Trockenheit auf die Entwicklung der Jugendstadien der Helminthen bei anatolischen Schafen.” Heft 71, 30 pp. [Also in Turkish.]

(381a) [Intradermal tests in the control of distomiasis (*Fascioliasis hepatica*). For abstract of this paper see Helm. Abs., Vol. VIII, No. 170a.]

(381b) Tunker found that *Fasciola hepatica* ova are killed by a temperature of  $-4^{\circ}$  C. in  $2\frac{1}{2}$  hours, and by desiccation in 24 hours: they become non-viable after a week at  $2^{\circ}$  C. On the other hand, the ova of sheep trichostrongyles and horse strongyles withstand  $-4^{\circ}$  C. for several days, and are not affected by gradual desiccation. B.G.P.

## 382—Archiv für Experimentelle Pathologie und Pharmakologie.

- a. OELKERS, H. A., 1940.—“Zur Wirkungsweise von Santonin und Chenopodiumöl.” 196, 161-163.

(382a) Oelkers has studied the action of chenopodium and santonin on denervated leech muscle preparations. Chenopodium, at a concentration of 20 to 30 mg. %, caused a strengthening in the contractions of the muscle after a variable period (sometimes more than an hour). When exposed to santonin, 20 to 25 mg. % solution in Ringer's solution [“Kaltblütreringerlösung”], the muscle contractions strengthened after 10 to 20 minutes. The nature of the contractions varied according to the anthelmintic used. W.P.R.

## 383—Archiv für Gynäkologie.

- \*a. PAWLICK, H., 1940.—“Über die Wurminfektionen des weiblichen Genitale einschliesslich des Beckenbindegewebes.” 170, 342-354.

## 384—Archiv für Hydrobiologie und Planktonkunde.

- a. KÜHN, G., 1940.—“Zur Ökologie und Biologie der Gewässer (Quellen und Abflüsse) des Wassergesprengs bei Wien.” 36 (2), 157-262.

(384a) During 1936 and 1937 Kühn surveyed the fauna of springs and other waters in the environs of Vienna. Two species of *Cercaria* (unidentified) were found, one in *Bythinella austriaca* (a new record) and the other in an unknown host. The following species of Nemato-morpha, which were identified or named by Heinze, are recorded: *Paragordionus rautheri*, *Gordionus wolterstorffi*, *G. scaber*, *G. s. lineatus* n. subsp., and *G. interjectus* n. sp. The new forms are not described or figured. A.E.F.

## 385—Archiv für Schiffs- und Tropen-Hygiene.

- \*a. ZELLWEGER, H., 1940.—“Über die durch *Schistosomum intercalatum* hervorgerufene Intestinal-Bilharziose im Gabun.” 44, 507-520.
- \*b. JUNGE, W., 1940.—“Die operative Behandlung der Elephantiasis des Beines.” 44, 549-562.
- \*c. VOGEL, H. & MINNING, W., 1940.—“Bilharziose bei Elefanten.” 44, 562-574.

(385a) Intestinal schistosomiasis caused by *Schistosoma intercalatum* occurs frequently in Gabon (French Equatorial Africa) in the territory of the lower reaches of the Ogowe River and its tributaries. The hepatic and intestinal symptoms described resemble those of *S. mansoni*. In addition there are allergic symptoms (urticaria and asthma); also dysmenorrhoea,

intestinal pains during pregnancy, and a tendency to abortion in the second half of pregnancy. *S. mansoni* and *S. haematobium* only occur sporadically in Gabon, but not in the indigenous population. [From an abstract in Zbl. Bakt., Abt. I, Ref., 139, p. 487.] R.T.L.

(385c) Asymmetrical Bilharzia eggs with a spine situated usually subterminally were found in the faeces of two Indian elephants. The adult is unknown and a specific diagnosis was not possible. Experimental infection of the African snail, *Planorbis pfeifferi*, and of another exotic *Planorbis* sp. of unknown origin with miracidia led to a very weak, transitory output of cercariae, whose form and bionomics are described in some detail. In two African elephants Bilharzia eggs were found with comparatively long bristle-like terminal spines. Male and female worms were found in large numbers in the intestinal veins. These are described as *Bivitellobilharzia loxodonta* n.g., n. sp. Experimental infections with five African molluscs were unsuccessful, but success was obtained with *Galba palustris* and the infection was transmitted to a mouse. [From an abstract in Zbl. Bakt., Abt. I, Ref., 139, p. 487.] R.T.L.

### 386—Archiv für Wissenschaftliche und Praktische Tierheilkunde.

- WETZEL, R. & QUITTEK, G., 1940.—“Über die Entwicklungsduer (Präpatentperiode) der parasitischen Würmer im Wirtstier.” *75* (5), 336-369.
- WETZEL, R., 1940.—“Zur Biologie des Fuchslungenwurmes *Crenosoma vulpis*. I. Mitteilung.” *75* (6), 445-450.
- WETZEL, R., 1940.—“Zur Entwicklung des grossen Palisadenwurmes (*Strongylus equinus*) im Pferd.” *76* (2), 81-118.

(386a) Distinguishing the phrase “prepatent period” from the clinical “incubation” and “latent periods”, and defining it as the period from the infestation of the definitive host to the sexual maturity of the parasite, Wetzel & Quittek proceed to list with brief comments the prepatent periods of all the principal helminths of man, ungulates, ruminants, pig, carnivores, birds, and rodents, grouped under those headings. A 4-page list of references [without titles] is similarly grouped. B.G.P.

(386b) In this first section of a monograph on the biology of *Crenosoma vulpis*, Wetzel briefly describes the adults and gives an illustrated description of each of the larval stages: free-living, in the molluscan intermediary, and in the canine definitive host. The ecdyses occur: 1st, 8 to 11 days; 2nd, 12 to 17 days after entering the mollusc; 3rd, 60 to 65 hours; 4th, 7 days after entering the definitive host. The prepatent period is about 19 days. B.G.P.

(386c) After infesting 14 foals with 3rd stage larvae of *Strongylus equinus* and killing them at various times from the 4th to the 158th day after infestation, Wetzel was able to trace the life-cycle in detail. After completion of the 2nd ecdysis in the small intestine the larvae penetrate into the mucosa, submucosa and even the muscularis of the large intestine where they become enclosed in nodules. In about 11 days the 4th stage larvae emerge and migrate to the liver (via the body cavity) where they remain for 6 or 7 weeks. Thence they migrate into the pancreas or the body cavity. The 4th ecdysis occurs on about the 118th day; but even on the 158th day (the end of the experiment) the young adults had not reached the caecum and colon. B.G.P.

### 387—Archives de l'Institut Pasteur de Tunis.

- BERGE, C., AUDOYÉ, H., FAUCONNIER, J. & BERRE, L., 1940.—“Un cas tunisien d'infestation par la grande douve du foie (*Fasciola hepatica*).” *29* (4), 466-470.

### 388—Archives of Pediatrics.

- WARING, J. I., 1940.—“Oxyuris infestation.” *57* (10), 615-619.

(388a) Waring reports the incidence of *Enterobius vermicularis* in children in Charleston County as determined by the use of the NIH swab. One swab per child revealed an 11% incidence in children in the Roper Hospital, 14% in white children of a rural school and 54% in an orphan asylum in Charleston. Of previous surveys by means of stool examination only one, 1938-39, recorded a 0.29% of 346 children positive. M.R.Y.

## 389—Archivio Italiano di Scienze Mediche Coloniali e di Parassitologia.

- \*a. MEDULLA, C., 1940.—“Il problema della schistosomiasi in Libia.” **21**, 217-239.
- \*b. COLOSIMO, C., 1940.—“Gli aspetti radiologici della Tenia.” **21**, 240-260.

## 390—Archivos Argentinos de Enfermedades del Aparato Digestivo y de la Nutrición.

- \*a. AYERZA, L., 1940.—“Cirrosis hipertrófica biliar hidatídica.” **15**, 589-597.

## 391—Archivos Argentinos de Neurología.

- \*a. BALADO, M. & PRADO, J. M., 1940.—“Sobre membranas quísticas intraventriculares.” **23**, 119-134.

## 392—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

- \*a. MAISONNAVE, A. D., 1940.—“Equinococosis parietal secundaria a quiste hidatídico del pulmón operado anteriormente.” **16**, 474-496.
- \*b. ETCHEGORRY, F. & PURRIEL, P., 1940.—“Pneumotórax de origen hidatídico.” **16**, 554-564.
- \*c. PIQUINELA, J. A. & PURRIEL, P., 1940.—“Quiste hidatídico del hígado abierto en los bronquios.” **17**, 84-92.
- \*d. LAMAS POUHEY, E., 1940.—“Sobre un caso de coleperitoneo hidatídico.” **17**, 145-154.
- \*e. LARGHERO YBARZ, P., 1940.—“Peritonitis hidatídica aguda por ruptura de Q.H. del hígado en el peritoneo.” **17**, 155-158.
- \*f. ETCHEGORRY, F., 1940.—“Coleperitoneo hidatídico agudo traumático.” **17**, 159-165.
- \*g. VOLPE, A., 1940.—“Peritonitis crónica biliosa de origen hidatídico (coleperitoneo hidatídico).” **17**, 166-169.
- \*h. CAMPO, J. C. DEL, 1940.—“Sobre las peritonitis crónicas de origen hidatídico con o sin bilis.” **17**, 170-191.
- \*i. CHIFFLET, A., PURRIEL, P. & ARDAO, H., 1940.—“El diagnóstico de la equinococosis pulmonar múltiple.” **17**, 437-449.
- \*j. CAMPO, J. C. DEL, 1940.—“Ruptura intraperitoneal de quiste hidatídico ; peritonitis plástica perihidatídica.” **17**, 548-554.
- \*k. LARGHERO YBARZ, P., 1940.—“Peritonitis purulenta e hidatídica por quiste hidatídico del riñón.” **17**, 595-617.

## 393—Arquivos Brasileiros de Cirurgia e Ortopedia.

- \*a. MORAIS, J. DE, 1940.—“Schistosomose e hiperplasia do reto.” **8**, 10-18.

## 394—Arquivos Brasileiros de Oftalmologia.

- \*a. BELFORT MATTOS, W., 1940.—“Cirurgia da cisticercose sub-retiniana. Um novo processo.” **3**, 163-168.

## 395—Arquivos do Instituto Benjamin Baptista.

- a. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1940.—“*Histiostrongylus octacanthus* n. sp. (Nematoda : Strongyloidea).” **6**, 91-93.
- b. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1940.—“*Plagiorchis didelphidis* (Parona, 1896), um parasito pouco conhecido de marsupiais.” **6**, 131-135.

## 396—Arquivos do Instituto Biológico. São Paulo.

- a. ARAUJO, T. L., 1940.—“Redescrição e novos hospedeiros de *Schneiderinema retusa* (Rud., 1819) Trav., 1927.” **11**, 17-20. [English summary p. 20.]
- b. PEREIRA, C. & CUOCOLO, R., 1940.—“Contribuição para o conhecimento da morfologia, bionomia e ecologia de *Tennocephala brevicornis* Monticelli, 1889.” **11**, 367-398. [English summary pp. 396-397.]
- c. PEREIRA, C. & CUOCOLO, R., 1940.—“Trematoides brasileiros do gênero *Mesocoelium* Odhner.” **11**, 399-412. [English summary pp. 411-412.]
- d. PEREIRA, C. & CUOCOLO, R., 1940.—“Trematoides vesicais de anfíbios do nordeste Brasileiro.” **11**, 413-420. [English summary p. 418.]
- e. GONZALEZ TORRES, D. M., 1940.—“Sobre um caso de schistosomose intestinal autóctone de Santos. Apendicite por *Schistosoma mansoni*.” **11**, 579-588. [German summary p. 587.]
- f. TRAVASSOS, L., 1940.—“Sobre uma espécie do gênero *Cloacitrema* Yamaguti, 1935, parasito de *Nyctanassa violacea* (L.).” **11**, 589-591.

(396a) Araujo redescribes *Schueiderinema retusa* from new material from the large intestine of the armadillos *Cabassus unicinctus* and *Dasyurus novemcinctus*. B.G.P.

(396b) Pereira & Cuocolo fully redescribe *Tremocephala brevicornis*, list a number of fresh-water turtles as hosts, and describe the artificial culture of the worms along with naidid oligochaetes. A complex commensal relationship exists between flatworms, oligochaetes, and turtles. B.G.P.

(396c) Pereira & Cuocolo redescribe *Mesocoelium incognitum* and describe *M. waltoni* n. sp. and *M. travassosi* n. sp. from *Bufo* spp. The high value of variation coefficients for the specific characters of *M. incognitum* lead them to reduce the number of species in the genus, to which they give a key. B.G.P.

(396d) The genus *Gordoderina* is split by Pereira & Cuocolo into the two new subgenera: (*Gordoderina*) with *vittalliloba* as type, and (*Neogorgoderina*) with *simplex* as type. They describe *G. (G.) rochalimai* n. sp. from *Bufo paracnemis*. B.G.P.

(396f) Travassos describes *Cloacitrema oswaldoi* n. sp. from the cloaca of *Nyctanassa violacea*. B.G.P.

### 397—Australian Museum Magazine.

a. McNEILL, F. A., 1940.—“Animal parasites—the tapeworms.” 7 (7), 229-233.

### 398—Australian and New Zealand Journal of Surgery.

a. ROBB, D., 1940.—“Hydatid cyst of the lung with extraordinary complications.” 10 (2), 191-193.

### 399—Berliner und Münchener Tierärztliche Wochenschrift.

a. STROH, G., 1940.—“Zum Bau der männlichen Wurmenden von *Dictyocaulus filaria* und *D. viviparus*.” Jahrg. 1940 (35), 422-423.  
b. REUTER, A., 1940.—“Über die Trichinose.” Jahrg. 1940 (51), 613-614.

(399a) Stroh points out that by direct comparison the male tail of *Dictyocaulus filaria* is readily distinguishable from that of *D. viviparus* by its larger size and by differences in the shape and size of the spicules and bursal rays. He points out that the mediolateral and dorso-lateral rays do not arise from a common stem in *D. filaria*, and that only the ventrolateral and dorsolateral rays in *D. viviparus* are knobbed. B.G.P.

(399b) Reuter gives a brief general account of the diagnosis, clinical symptoms, pathology, treatment, and prophylaxis of trichinelliasis in man. A.E.F.

### 400—Better Crops with Plant Food.

\*a. NEAL, D. C., 1940.—“Cotton wilt and root-knot nematode.” 24 (2), 36-37.

(400a) Recent surveys show the apparent break-down of wilt-resistance in special wilt-resistant cotton varieties growing in Gulf Coastal Plain areas heavily infected with *Fusarium vasinfectum* and *Heterodera marioni*, when the roots are attacked by the nematodes. In infected areas rotation with nematode-resistant crops is recommended. [From an abstract in Exp. Sta. Rec., 84, p. 63.] M.T.F.

### 401—Bi-Monthly Bulletin. Ohio Agricultural Experiment Station.

a. TILFORD, P. E., 1940.—“Root knot of peony.” 25 (205), 132-134.

(401a) Tilford reports on hot-water treatments of peony roots infected with *Heterodera marioni*. After treatment the plants were cooled in running water, planted in uninfected silty loam soil and examined eight years later. Of those treated for 45 minutes at 118° F. six were free of galls and three were not; after 30 minutes at 120° F. four were free and four were not; after 30 minutes at 122° F. one was free and three were not. Treated and untreated, galled and not galled, all grew well. He concludes that, in the rich heavy soil of the locality, where root-knot is widespread, it is not a serious pest, although it is injurious in sandy soils. M.T.F.

## 402—Biological Bulletin.

- \*a. WILHELMI, R. W., 1940.—“Serological reactions and species specificity of some helminths.” 79 (1), 64-90.
- \*b. MARTIN, W. E., 1940.—“Studies on the trematodes of Woods Hole. III. The life cycle of *Monorchides cumingiae* (Martin) with special reference to its effect on the invertebrate host.” 79 (1), 131-144.
- \*c. RANKIN, JR., J. S., 1940.—“Studies on the trematode family Microphallidae Travassos, 1921. IV. The life cycle and ecology of *Gynaecotyla nassicola* (Cable and Hunninen, 1938) Yamaguti, 1939.” 79 (3), 439-451.

(402a) Wilhelm has used precipitation reactions as a means of assessing closeness of relationships between certain helminth species. The species involved were *Parorchis acanthus*, *Cryptocotyle lingua*, *Zygocotyle lunata*, *Plagitura parva*, *Siphodera vinalledwardsii*, *Tetabothrium* sp., *Moniezia expansa*, *Dipylidium caninum* and *Taenia taeniaeformis*. It seems that the Echinostomatidae and Heterophyidae are closer to each other than the Plagiorchidae or Paramphistomidae. Further the Paramphistomidae is closer to the Heterophyidae than to the Echinostomatidae. *T. taeniaeformis* stands far away from either of the other two cestodes examined. He could find no difference between larval and adult antigens, suggesting that maturity of chemical activity is acquired early. [From Biol. Abs., 14, Abstract No. 16971.]

P.A.C.

(402b) *Monorchides cumingiae*, a parasite of the flounder and eel in the Woods Hole district finds a satisfactory vector in the clam, *Cumingia tellinoides*. It can pass its whole larval history from sporocyst to metacercaria in this bivalve. *Tellina tenera* forms a suitable second intermediate host and on one occasion was found to be serving as a first vector as well. Cercariae congregate largely round the foot and the incurrent siphons, and metacercariae in the gills and mantle. There was a tendency for a precipitation of a darkly staining material round the metacercariae but there seemed to be no development of resistance. [From Biol. Abs., 14, Abstract No. 16967.]

P.A.C.

(402c) Adults of *Gynaecotyla nassicola* occur in the intestine of American shore birds and the cercariae develop in sporocysts in *Nassa obsoleta*, escape into moist sand and penetrate the branchial lamellae of the amphipod *Talorchestia longicornis* in which they are found as metacercariae in the pericardial cavity. Young gulls (*Larus argentatus*) were used experimentally as final hosts. Close correlations are found between the ecology of host and parasite. The genus *Gynaecotyla* is emended. Important characters separating Microphallidae from Heterophyidae include the removal of the acetabulum from the genital suckers and the use of crustacea as second intermediate hosts. [From Biol. Abs., 15, Abstract No. 9730.] N.G.S.

## 403—Boletín de la Academia Nacional de Medicina de Buenos Aires.

- \*a. ELIZALDE, P. I., ITOIZ, O. A. & LATIENDA, R. I., 1940.—“Hiperplasia adenomatosa de compensación y cirrosis por gran quiste hidatídico de hígado.” Year 1940, pp. 210-225.

## 404—Boletín del Instituto de Clínica Chirúrgica. Universidad de Buenos Aires.

- a. DÉVÉ, F., 1940.—“Échinococcosis hydatique et échinococcosis alvéolaire. Coexistence des deux lésions dans le système musculaire observée chez un normand.” 16 (134), 221-242.
- b. ALONSO, L. M., 1940.—“Equinococcosis: breves comentarios de patología general y clínicos de las principales localizaciones.” 16 (134), 318-326.
- c. IVANISSEVICH, O. & RIVAS, C. I., 1940.—“Técnica precisa para el tratamiento de los quistes hidatídicos del pulmón, por el método de Lamas y Mondino.” 16 (135), 341-345.

## 405—Boletín Sanitario del Departamento Nacional de Higiene. Buenos Aires.

- a. GARCÍA, J. C., 1940.—“La uncinariasis en la provincia de Corrientes.” 4 (9/12), 615-627.

## 406—Boletines y Trabajos. Academia Argentina de Cirugía.

- \*a. MIRIZZI, P. L & RICCI, A. A., 1940.—“Hidatídes retroperitoneales: renal y pararrenal.” 24, 1208-1215.
- \*b. MIRIZZI, P. L., 1940.—“Dificultades en el diagnóstico topográfico de la equinococcosis hepática.” 24, 1289-1302.

## 407—Boletines y Trabajos. Sociedad de Cirugía de Córdoba.

\*a. BUTELER, E., 1940.—“Quiste hidatídico de cuello de útero.” 1, 26-40.

## 408—Brasil-Medico.

- a. RENAULT, L. & VERSIANI, W., 1940.—“Parasitismo humano por helminthos e protozoarios em Bello Horizonte: dados estatísticos.” 54 (29), 487-492.
- b. CALDAS, J. M., 1940.—“Schistosomose em proctologia.” 54 (32), 535-536.
- c. ROMEU CANÇADO, J., 1940.—“Estudo sobre a frequência dos parasitas intestinaes humanos; comentários a propósito de 1,000 exames de fezes.” 54 (33), 551-558.
- d. ARAUJO COSTA, G., 1940.—“Papel das infestações na imunidade natural e nas infecções.” 54 (45), 743-745.

(408c) Of 1,000 faecal examinations made by Romeu Cançado of the Laboratorio Carlos Chagas, Bello Horizonte, helminth infections of the following percentages were noted: *Ascaris lumbricoides* 19.2%, *Necator americanus* 15.2%, *Trichuris trichiura* 22.1%, *Strongyloides stercoralis* 8.2%, *Enterobius* 2.8%, *Taenia saginata* 0.7%, *T. solium* 0.1%, *Schistosoma mansoni* 2.3%.

R.T.L.

## 409—Bruxelles Médical.

\*a. FRANZOSO, Z., 1940.—“Un élément nouveau à considérer comme cause concomitante importante dans la pathogénie des formes broncho-pulmonaires tuberculeuses et non tuberculeuses.” 20, 813-828.

## 410—Bulletin de Biologie et de Médecine Expérimentale de l'URSS.

\*a. MALEVICH, I. I., 1940.—[Migration of *Trichinella* larvae in rat parabirosis.] 9, 204-207.

## 411—Bulletin of the Illinois State Natural History Survey.

\*a. LEIGH, W. H., 1940.—“Preliminary studies on parasites of upland game birds and fur-bearing mammals in Illinois.” 21 (5), 185-194.

(411a) Leigh records helminth parasites found in *Tympanuchus cupido americanus*, *Colinus v. virginianus*, *Phasianus colchicus torquatus*, *Didelphis virginiana*, *Vulpes fulva*, *Procyon lotor*, *Ondatra zibethica*, *Mustela vison* and *Mephitis mephitis*. Mortality in prairie chickens may occur from cestodes. [From Biol. Abs., 15, Abstract No. 1622.]

R.T.L.

## 412—Bulletin de la Société de Pathologie Exotique.

\*a. MONTESTRUC, E., 1940.—“Bilharziose vésicale à *Schistosoma mansoni*.” 33, 333-334.

## 413—Bulletin. Washington State Agricultural Experiment Station.

a. McCULLOCH, E. C. & NICHOLSON, L. G., 1940.—“The efficiency of phenothiazine and related products in removing internal parasites in poultry.” No. 394 [50th Annual Report], p. 85.

(413a) McCulloch & Nicholson report that phenothiazine given to fowls in doses of 0.05 to 0.5 g. is effective against Heterakis, and that large and repeated doses are non-toxic.

B.G.P.

## 414—Bulletin. West of Scotland Agricultural College, Department of Plant Husbandry.

a. GEMMELL, A. R., 1940.—“Studies in the biology and control of *Heterodera schachtii* (Schmidt). Part I. A comparison of the *Heterodera schachtii* cyst population of two potato growing districts.” No. 139, 15 pp.

(414a) Gemmell has devised a method for determining the number of larvae hatching from individual cysts of *Heterodera schachtii* over extended periods, and uses it for comparing the cyst population of two fields. He finds that in one population a higher percentage of cysts produces larvae, and they give a greater number of larvae per cyst, even when the size of the cysts is taken into consideration. These differences were maintained in a new generation of cysts of the two populations produced under similar, controlled conditions. In one population there is evidence of a period of dormancy or maturation which must elapse before maxi-

mum hatching can be induced. The author infers that, as a means of determining the degree of infestation of a soil, cyst counts are inadequate, and that geographic or phenotypic races of *H. schachtii* (potato strain) occur.

M.T.F.

**415—Canadian Medical Association Journal.**

- a. KUITUNEN-EKBAUM, E., 1940.—“A survey of entozoa in adults in a Toronto hospital.” 43 (5), 451-453.

(415a) Faecal specimens from 324 patients in the Toronto Western Hospital gave evidence of *Taenia saginata*, *Diphyllobothrium latum*, *Enterobius vermicularis* once only, and of two cases of *Trichuris trichiura*.

R.T.L.

**416—Ceres. Minas Geraes.**

- \*a. CARVALHO, J. C. M., 1940.—[A contribution to the knowledge of the helminth fauna of Minas Geraes.] 1 (5), 411-423. [English summary p. 423.]

**417—Chinese Medical Journal.**

- a. HSÜ, H. F. & LI, S. Y., 1940.—“Studies on the food and the digestive system of certain parasites. VI. On the food of certain helminths living in the digestive tract of vertebrates.” 57 (6), 559-567.  
 b. HSÜ, H. F., 1940.—“*Euparyphium jassyense* Leon & Ciurea (=*E. melis* (Schrank)) found at the autopsy of a Chinese.” 58 (5) 552-555.  
 c. CHANG, K. & LIN, C. C., 1940.—“Intestinal parasite infections of man in Chengtu and its vicinity.” 58 (5), 570-581.  
 d. LI, Y., 1940.—“Incidence of parasitic ova and appendicular faecaliths.” 58 (5), 592-594.

(417a) Hsü & Li have examined the intestinal contents of *Physaloptera clausa*, *Ascaridia lineata*, *Camallanus intermedius*, *Heterakis gallinae*, *Azygia hwangtsiyüi*, *Pleurogenes* sp., *Plagiorchis* sp. and *Diplodiscus amphichrus japonicus* by histological methods. As the result of this and other work, the authors conclude that parasites may be divided into 4 classes: (i) those living largely on blood elements, e.g. *Ancylostoma caninum* and *Azygia hwangtsiyüi*, (ii) those living on inflammatory exudate with some mucosa cells, e.g. *Pleurogenes* sp. and *Plagiorchis* sp., (iii) those living on predigested host tissue, e.g. *Physaloptera clausa* and *Camallanus intermedius*, and (iv) those living on ingesta from the host gut, e.g. *Ascaridia lineata*, *Heterakis gallinae* and *Diplodiscus amphichrus japonicus*.

W.P.R.

(417b) Two specimens of the trematode *Euparyphium jassyense*, hitherto reported only once from man in Romania, were recovered at post-mortem on a Chinese labourer at Peiping. It is pointed out that the species is identical with *E. melis* of badgers, hedgehogs and other mammals and has been recorded in Japan from dogs.

R.T.L.

(417d) Of 72 appendices examined, 20 contained faecaliths or faecal material and in all of these parasitic ova occurred.

R.T.L.

**418—Circular. Montana State College Agricultural Experiment Station.**

- a. ANON, 1940.—“Intestinal worms in sheep.” No. 159, 6 pp.

**419—Cuore e Circolazione.**

- \*a. LIUZZO, G., 1940.—“Sulla echinococcosi cardiopolmonare.” 24, 487-499.

**420—Deutsche Medizinische Wochenschrift.**

- a. STADLER, H., 1940.—“Enzephalitis bei Trichinose.” 66 (41), 1135-1136.

**421—Deutsche Militärarzt (Der).**

- \*a. KRUCHEN, C., HARING & LEDERER, E., 1940.—“Ueber eine Gruppenerkrankung an Trichinose.” 5 (6), 209-218.

## 422—Deutsche Tierärztliche Wochenschrift.

- a. SCHOOP, 1940.—“Die Tierseuchen im Wartheland.” **48** (44), 523-525.
- b. SCHMID, F., 1940.—“Zur Uebertragungsmöglichkeit von Parasiten zwischen Haustieren und Wild.” **48** (51-52), 638-639.

(422a) Schoop surveys the incidence of animal diseases in Wartheland (Posen). Among parasitic diseases he gives the first place to liver-fluke disease, which causes very serious losses in cattle and sheep. Summer sores, caused by *Habronema* larvae, occur in horses in the autumn and interfere with harvest work. Ascariasis and oesophagostomiasis are frequent in young pigs. Poultry are infected with a large variety of helminths of which *Syngamus trachea*, *Antidostomum anseris* and *Echinuria uncinata* are most common. A.E.F.

(422b) Schmid considers the possibility of domestic animals becoming parasitized with parasites of wild animals and vice versa. Among the lungworms the only one capable of such infection is *Dictyocaulus viviparus* which may infect both the deer and the ox. Among stomach and intestinal worms there are wider possibilities for there are several species of *Trichostyngylus*, *Ostertagia*, *Nematodirus* and of several other genera common to both domestic and wild hosts. Similarly there are also cestode and trematode species parasitizing both groups of hosts. He also briefly considers protozoan and arthropod parasites. P.A.C.

## 423—Deutsche Zeitschrift für Chirurgie.

- \*a. FRIEDRICH, H., 1940.—“Über die Diagnose des infiltrierend wachsenden Echinococcus (*Echinococcus alveolaris*), insbesondere seine Röntgendiagnose.” **254** (2-3), 150-180.

## 424—Dia Médico.

- \*a. CEBALLOS, A., 1940.—“Epiteloma y quiste hidático de pulmón.” **12**, 816-819.
- \*b. PAVLOVSKY, A., 1940.—“Problemas que plantea la hidatidosis del hígado.” Ed. espec. No. 9, pp. 193-195.

## 425—Dōbutsugaku Zassi. (Zoological Magazine).

- a. MIYATA, I., 1940.—“On a new trematode, *Opisthiozylphe canis*, parasitic to the small intestine of dogs.” **52** (10), 367-371. [In Japanese: English summary p. 371.]

(425a) Miyata describes and figures *Opisthiozylphe canis* n. sp. recovered from the small intestine of a dog at Kobe, Japan. In the Japanese text a table gives the comparative measurements of *O. canis*, *O. hinoi* and *Plagiorchis muris*. A.E.F.

## 426—Ecological Monographs.

- a. PENNAK, R. W., 1940.—“Ecology of the microscopic Metazoa inhabiting the sandy beaches of some Wisconsin lakes.” **10** (4), 537-615.

(426a) During the summers of 1936, 1937 and 1938 Pennak carried out an ecological study of the microscopic metazoa inhabiting the capillary waters of 20 exposed sandy beaches on the shores of 15 Wisconsin lakes. Many free-living nematodes were found, but were not identified. A few selected at random belonged to the genera *Trichibus*, *Actinolaimus*, *Dorylaimus* and *Mononchus*. A.E.F.

## 427—Eesti Loomaarstlik Ringvaade.

- a. LIIK, K., 1940.—“Ein Fall von *Dicrocoelium lanceatum* Invasion in der Leber eines Rehes.” **16** (1), 28-32. [In Estonian: German summary p. 32.]

## 428—Florists' Exchange.

- \*a. CHITWOOD, B. G., 1940.—“Ethylene chloride for soil sterilization against nematodes.” **95** (11), p. 9.

(428a) Experiments indicate that ethylene chloride, both alone and with chloropicrin, is highly effective in ridding soil of bulb-and-stem and root-knot nematodes: it is cheaper than chloropicrin. [From an abstract in Exp. Sta. Rec., **84**, p. 639.] M.T.F.

429—*Folia Zoologica et Hydrobiologica*.

- a. ALLGÉN, C., 1940.—“Ueber einige norwegische marine Tiefen-Nematoden.” 10 (1), 258-281.
- b. ALLGÉN, C., 1940.—“Über einige neue freilebende Nematoden von der Nordwest- und Nordküste Norwegens.” 10 (2), 443-449.
- c. ALLGÉN, C., 1940.—“Weitere freilebende Nematoden insbesondere aus dem Schalensand- und Kiesboden der Strandzone Norwegens.” 10 (2), 487-508.

(429a) Allgén lists and describes numerous marine nematodes from deep waters off the north and northwest coasts of Norway. The following species are new to science: *Enoplolaimus spissignathus* n. sp., *Siphonolaimus norvegicus* n. sp., *Richtersia norvegica* n. sp., *Dichromadora strandi* n. sp., *Microlaimus paraborealis* n. sp., *Araeolaimus ingöiensis* n. sp., *Paracanthonchus siphonolaimoides* n. sp., *Halichoanolaimus norvegicus* n. sp. and *Paralinhomoeus stairensis* n. sp.

T.G.

(429b) Allgén gives brief descriptions of the following 5 new species of marine nematodes collected off the north and northwest coast of Norway: *Anticoma strandi* n. sp., *Viscosia nordgaardi* n. sp., *Spilophora borealis* n. sp., *Camacolaimus parocellatus* n. sp. and *Leptolaimus lyngci* n. sp.

T.G.

(429c) Allgén gives further short notes and descriptions of Norwegian marine nematodes including one new species, namely, *Enoplolaimus strandi* n. sp.

T.G.

430—*Fortschritte der Therapie*.

- \*a. KRUCHEN, C., 1940.—“Die Behandlung der Trichinose mit Fuadin.” 16, 309-322.

431—*Gaceta Médica de México*.

- \*a. TORRES ESTRADA, A., 1940.—“Hallazgo de un parásito filariforme en el humor acuoso de una paciente oncocercosa, operada de catarata.” 70, 572-581.

432—*Gazeta Clínica*.

- \*a. BARMAK, M., 1940.—“Um caso de apendicite por schistosomose.” 38, 247-248.

433—*Geneeskundig Tijdschrift voor Nederlandsche-Indië*.

- a. BONNE, C., 1940.—“Een tweede waarneming van hypereosinophilie in de milt, gecombineerd met een filaria-infectie.” 80 (28), 1704-1706. [English summary p. 1706.]
- b. BONNE, C., 1940.—“Over *Bertiella studeri* (Blanchard 1891).” 80 (38), 2222-2230. [English summary p. 2230.]
- c. SOETRISNO, 1940.—“De bevolking der Wae Apo-vlakte en de aldaar voorkomende filariasis, (Eiland Boeroe). Hoofdstuk II. Filariasis-onderzoek in de Wae Apo-vlakte.” 80 (40), 2349-2375.
- d. BONNE, C., 1940.—“De lintwormen van den mensch in Indië. Samenvattend overzicht.” 80 (40), 2376-2384.
- e. TILLEMA, S., 1940.—“Voeding, ijzer, chenopodiumolie en leverextract bij een geval van mijnwormanaemie.” 80 (41), 2400-2404.
- f. LIE KIAN JOE, 1940.—“Autoinfectie bij strongyloidiasis als vermoedelijke doodsoorzaak.” 80 (43), 2550-2553. [English summary p. 2553.]
- g. BONNE, C. & LIE KIAN JOE, 1940.—“Over darmwandhelminthiasis.” 80 (48), 2782-2788. [English summary p. 2788.]
- h. BONNE, C. & LIE KIAN JOE, 1940.—“Darmwandhelminthiasis teweeggebracht door spargana.” 80 (48), 2788-2792. [English summary p. 2792.]

(433b) Describing an infestation of *Bertiella studeri* in a 7-year-old Chinese girl in Java, Bonne reports that the material did not differ markedly from specimens from Javanese monkeys. He briefly reviews the literature of human infestations.

B.G.P.

(433c) Soetrisno presents detailed statistics on the incidence of Filariasis bancrofti and elephantiasis in a plain on the island of Buru. Among 832 persons the filarial index was 51.8%, being highest in adult males. Half of 40 cases of elephantiasis (index: 4.8%) were positive for microfilariae. Eight 3-hourly microfilarial counts from 16 patients gave a peak at 3 a.m. with a possible secondary peak at 6 p.m.

B.G.P.

(433d) Bonne briefly reviews the 6 species of tapeworm recorded from man in the Dutch East Indies: the two Taenias, Dipylidium, *Hymenolepis diminuta* (*H. nana* has not yet been recorded) and single cases each of Raillietina and Bertiella. B.G.P.

(433e) On a case of hookworm anaemia Tillema bases a brief discussion of this condition. He shows that iron therapy alone is good whilst it is continued, but the haemoglobin index rapidly falls again when the iron is withheld. Injections of liver preparations are practically useless. Only a combination of iron therapy with anthelmintic treatment is really effective. Dietary deficiencies are not the sole cause of hookworm anaemia, which can occur even in the presence of good feeding. B.G.P.

(433f) Lie Kian Joe describes a fatal case of *Strongyloides* infestation in a Japanese fisherman. The presence of enormous numbers of rhabditiform larvae and some filariform larvae in duodenal contents and in vomit, leads him to suggest auto-infestation. These filariform larvae were no larger than those found in cultures and thus too small to have completed the normal migration. B.G.P.

(433g) From 2,000 post-mortem examinations Bonne and Lie Kian Joe describe 4 new cases of infestation of the intestinal wall of man by *Ancylostoma duodenale*: 3 concerned single specimens and the fourth had 5. In each case the worm lay in a haemorrhagic area in the submucosa, usually of the small intestine. In 3 cases Necator was far more numerous in the lumen than *Ancylostoma*. B.G.P.

(433h) Two spargana, found by Bonne & Lie Kian Joe in nodules in the wall of a human jejunum and subsequently dissected out and fed to a kitten, yielded specimens of *Diphyllobothrium (Spirometra)* sp. respectively 110 cm. and 84 cm. long. The spargana were only about 2 cm. long. B.G.P.

#### 434—Giornale Italiano di Dermatologia e Sifilologia.

\*a. CAPPELLI, E., 1940.—“Espressioni dermatologiche in relazione con infestazioni intestinali da elmi.” 81, 595-650.

#### 435—Giornale di Medicina Militare.

\*a. LANERI, G., 1940.—“Sugli aspetti radiologici della cisti da echinococco del polmone.” 88, 430-446.

#### 436—Gyógyászat.

\*a. BENKOVICH, G., 1940.—[Hydatidosis of the spine.] 80, 472-473.

#### 437—Hihu-to-Hitunyo.

\*a. HUTAGAMI, Y. & HORIGUTI, Y., 1940.—[Kasuistische Beiträge zur Filarialymphangitis des Samenstrangs.] 8, p. II.

#### 438—Illinois Medical Journal.

a. KAPLAN, J. H., 1940.—“Oxyuriasis as an etiological factor of appendicitis.” 78 (5), 441-442.

#### 439—Japanese Journal of Medical Sciences. IV. Pharmacology.

†a. TANABE, T., 1940.—“Vergleichende Untersuchungen über die pharmakologischen Eigenschaften einiger Anthelminthika und der zur Terpenreihe gehörigen Substanzen; sowie Wurmabtriebungsversuche mittels Menthols an Hunden.” 12, 40\*-42\*.  
 †b. YAMANOUYE, M., 1940.—“Studien über die Wirkungen der verschiedenen wurmtriebenden Mittel, die an Fröschen beobachtet wurden.” 12, 42\*-43\*.  
 †c. GO, C., 1940.—“Über die wurmaustreibende Wirkung des *Sargassum Thunbergii* J. Ag.” 12, 43\*-48\*.

(439a) Tanabe, investigating the action of certain anthelmintics and terpenes on muscles from earthworms and the small intestine of the rabbit, noted changes leading to decreased

† Paper presented at the 13th Annual Meeting of the Japanese Pharmacological Society, Taihoku, October 1939.

tonus and immobility. *In vitro* anthelmintic tests showed menthol to be effective against Ascaris of the horse and pig. Given in paraffin or gum arabic, menthol was fairly efficient in expelling ascarids from dogs.

W.P.R.

(439b) Yamanoue (using Gros's method) examined the action of certain anthelmintics against frog parasites. A mixture of male fern and oil of chenopodium was found to be most efficient against *Diplodiscus* sp., *Loxogenes* sp. and *Cosmocerca* sp. The minimum amounts of the various anthelmintics which destroyed these parasites are listed.

W.P.R.

(439c) Go has examined superficially the anthelmintic and pharmacological properties of water and alcoholic extracts of *Sargassum Thunbergii*. Doses of 2 to 0.2 g. of the dried extracts were given to cats and occasionally ascarids and taeniids were found in the faeces after treatment. Control Ascaris (from swine) lived longer than those kept in water extracts of the plant. For mice, the minimum lethal subcutaneous dose of the water extract was 1.0 c.c. of 5% solution per 10 g. body weight.

W.P.R.

#### 440—Journal of Agriculture. University of Puerto Rico.

- a. ANDREWS, J. S. & MALDONADO, J. F., 1940.—“A preliminary note on the internal parasites of Puerto Rican cattle, with special reference to those species found in calves suffering from ‘tropical diarrhea’.” **24** (4), 121-132.

(440a) A condition known as “tropical diarrhoea” attributed to parasitic worms has made the raising of calves in some parts of Puerto Rico almost impossible. The commonest species in 22 calves were *Bunostomum phlebotomum* (77.3%), *Oesophagostomum radiatum* (63.6%), *Cooperia punctata* (54.5%) and *Haemonchus contortus* (50%). *Strongyloides papillosus* occurred in 1 case and *Dictyocaulus viviparus* in 3 cases. [From an abstract in *Exp. Sta. Rec.*, **85**, pp. 821-822.]

R.T.L.

#### 441—Journal of the American Medical Association.

- a. AMERICAN MEDICAL ASSOCIATION, 1940.—“Phenothiazine. Preliminary report of Council on Pharmacy and Chemistry.” **115** (20), p. 1721.  
 b. LEHRFELD, L. & BREISACHER, C. F., 1940.—“A case of trichinosis presenting chemosis of the bulbar conjunctiva.” **115** (21), 1794-1795.

(441a) In a preliminary report of the Council of Pharmacy and Chemistry of the American Medical Association on phenothiazine, it is stated that “there is lacking sufficient evidence both from the chemical point of view and from that of clinical research to justify general use by the medical profession at this time. In view of the experimental nature of the drug the Council suggests that further investigations with adequate controls will be useful for a proper evaluation of the therapeutic possibilities of phenothiazine”. R.T.L.

(441b) In recording a case of bulbar conjunctival chemosis due to trichinosis, Lehrfeld & Breisacher emphasise the importance of making a blood count in any case of conjunctival oedema presenting a waxy yellow appearance and without apparent cause. R.T.L.

#### 442—Journal of Bacteriology.

- a. BAKER, D. W. & SAWYER, J., 1940.—“Gastrointestinal worm parasitism acquired by sheep during winter season.” [Paper presented at a meeting of the Eastern New York Branch of the Society of American Bacteriologists, Troy, N.Y., April 1940.] **40** (1), 166-167.

(442a) Lambs, known to be free of intestinal parasites, were transferred for the winter months to stables in which the bedding had been previously contaminated by the faeces of adult sheep. Six weeks later the first positive findings of eggs were recorded in the faecal examinations. Various species of Strongyloidea and Trichuroidea were represented, together with the genus *Moniezia*. R.T.L.

#### 443—Journal of Cellular and Comparative Physiology.

- a. BEAMS, H. W. & KING, R. L., 1940.—“Effects of low temperature on survival and mitotic figure of eggs of *Ascaris equorum*.” **15**, 409-410.

(443a) Dividing eggs of *Ascaris equorum* are very resistant to intense cold. Exposure to a temperature of  $0^{\circ}$  C. for two months or to  $-27^{\circ}$  C. for 24 hours does not kill them nor affect their normal development to the larval stage when returned to higher temperatures. They were, however, killed when subjected to the temperatures of dried ice or liquid air for 30 minutes. The chromosomes often appeared to be vacuolated and the mitotic figure distorted after such treatment. There is no evidence that low temperatures tend to liquify the gelled achromatic figure in *Ascaris*. P.A.C.

**444—Journal of the Department of Agriculture. South Australia.**

- a. McAULIFFE, W. S., 1940.—“Control of internal parasites in pigs.” **44**, 66–67.

**445—Journal of Helminthology.**

- a. FENWICK, D. W., 1940.—“Methods for the recovery and counting of cysts of *Heterodera schachtii* from soil.” **18** (4), 155–172.
- b. BUCKLEY, J. J. C., 1940.—“Observations on the vertical migrations of infective larvae of certain bursate nematodes.” **18** (4), 173–182.
- c. ROGERS, W. P., 1940.—“The physiological ageing of the infective larvae of *Haemonchus contortus*.” **18** (4), 183–192.
- d. FRANKLIN, M. T., 1940.—“On the specific status of the so-called biological strains of *Heterodera schachtii* Schmidt.” **18** (4), 193–208.

(445a) Fenwick describes a method of recovering cysts from damp soil by means of a continuous process. Quantities of 1 cwt. of soil can be dealt with in a matter of 2 hours. A new method of recovering the cysts from the float by differential flotation is also described. Particulars are also given of modifications rendering possible the enumeration of the number of cysts in a sample of soil to a known degree of accuracy, together with a new type of cyst counting slide. D.F.

(445b) A technique is described for the study of the migrations of infective larvae of strongyles. The influence of temperature on the vertical migrations of infective larvae of *Trichonema*, *Haemonchus contortus* and *Ancylostoma caninum* is demonstrated. At temperatures below  $10^{\circ}$  C. the vertical migrations of *Trichonema* and *H. contortus* larvae are inhibited. Between  $10^{\circ}$  C. and  $15^{\circ}$  C. both these species show a well-marked positive geotropism. Above  $15^{\circ}$  C., up to  $37^{\circ}$  C., the larvae migrate both upwards and downwards in an apparently indiscriminate manner. Infective larvae of *A. caninum* mostly migrate downward at temperatures between  $10^{\circ}$  C. and  $15^{\circ}$  C., but this tropism is not so definite as in the other two species. On a horizontal surface the larvae of *Trichonema* are negatively phototropic to daylight. Larvae of *H. contortus* do not reach to light so markedly as larvae of *Trichonema*. J.J.C.B.

(445c) Rogers has examined the changes in fat content (estimated by staining methods), infectivity (to goats) and activity at  $30^{\circ}$  C. of infective *Haemonchus contortus* larvae stored at  $37^{\circ}$  C.,  $24^{\circ}$  C. and  $7^{\circ}$  C. Except in slowly aged larvae when infectivity fell more rapidly than fat content or activity, the three factors fell at a similar rate as age increased. A method for determining the approximate infectivity of larvae by studying the fat content and the activity is given. W.P.R.

(445d) On the basis of differences in the shape and surface markings of the cysts, in the length of the larvae, in the morphology of the spicules of the male and in the bionomics, Franklin considers that the beet, potato, pea and oat strains of *Heterodera schachtii* should be four separate species. The names of the four species, the characters of which are tabulated, are: for the beet strain *H. schachtii*, the potato strain *H. rostochiensis*, the pea strain *H. göttingiana*, and the oat strain *H. major*. M.T.F.

**446—Journal of the Medical Association of the State of Alabama.**

- a. SMITH, W. H. Y. & DAMON, S. R., 1940.—“Diagnosis of *Enterobius vermicularis* infestation, with observations on treatment with hexylresorcinol by mouth and in the form of rectal jelly.” **10** (6), 209–211.

(446a) *Enterobius* infestation was diagnosed by NIH swabs in 189 out of 483 individuals in several institutions. Swabs were taken on alternate days—3 to 7 for diagnosis and

4 to 6 for post hexylresorcinol treatment testing. The oral dose of hexylresorcinol was as follows: under 6 years of age, two 0.2 g. pills; 6 to 8, three 0.2 g. pills; 8 to 12, four 0.2 g. pills; 12 and over, five 0.2 g. pills. In one group the oral treatment consisted of a single dose of pills, while in the other group the dose was repeated every third day for five doses. In both groups 5 to 10 c.c. of hexylresorcinol jelly were injected into the rectum after each defaecation and before retiring at night. Although the samples were small almost as good results were obtained with one oral dose as with five oral doses, 21 persons or 24.1% of 87 white persons being positive after the single dose treatment as compared with 7 or 22.6% of 31 white persons being positive after the five dose treatment. Of the Negro group 29 or 51.8% of 56 persons treated were still positive after the five dose treatment.

M.R.Y.

#### 447—Journal of Morphology.

- a. PENNYPACKER, M. I., 1940.—“The chromosomes and extranuclear material in the maturing germ cells of a frog lung fluke, *Pneumonoces similipectus* Stafford.” **66** (3), 481-495.

#### 448—Journal of Nervous and Mental Diseases.

- a. ADELSTEIN, L. J., 1940.—“Cysticercus cyst of the fourth ventricle with surgical removal. Case report.” **92** (5), 623-629.

#### 449—Journal of Pharmacology and Experimental Therapeutics.

- a. CULBERTSON, J. T., 1940.—“The elimination of the tapeworm *Hymenolepis fraterna* from mice by the administration of atabrine.” **70** (3), 309-314.

#### 450—Journal of the Philippine Islands Medical Association.

- a. GARCIA, D. A., 1940.—“Cecal schistosomiasis simulating a malign new growth.” **20**, 471-473.  
\*b. GUEVARA, R., DAMIAN, A. J. & UYENCO, V., 1940.—“New light on the anthelmintic action of santonin from an experimental standpoint.” **20**, 513-522.

#### 451—Journal of the Royal Army Veterinary Corps.

- a. EDWARDS, W. P. S. & SINTON, W. L., 1940.—“Equine nasal granulomata due to *Schistosoma nasalis*.” **12** (1), 36-37.

#### 452—Journal of the Royal Microscopical Society.

- a. BEAMS, H. W. & KING, R. L., 1940.—“The air-driven ultracentrifuge: its application in biology, together with some effects of ultracentrifuging the eggs of *Ascaris suum*.” Series 3, **60** (4), 240-256.

#### 453—Journal of the Tennessee Academy of Science.

- \*a. EDNEY, J. M., 1940.—“A heavy infestation of *Clinostomum marginatum* metacercariae in channel catfish.” **15** (4), p. 371.  
\*b. EDNEY, J. M., 1940.—“The occurrence of *Echinococcus granulosus* in dogs collected in Murfreesboro, Tennessee.” **15** (4), p. 395.  
\*c. CHRISTENSON, R. O., 1940.—“Studies on some early developmental stages of nematode worms.” [Abstract.] **15** (4), p. 415.  
\*d. EARL, jr., H. H., HOWELL, H. & CHRISTENSON, R. O., 1940.—“Studies on the thermal death points and heat tolerance of eggs of *Heterakis gallinae* and *Ascaridia lineata*.” [Abstract.] **15** (4), p. 416.  
\*e. KENT, jr., G. C., 1940.—“A new trematode from *Siren lacertina*: *Diplostomulum sirenis* n. sp.” [Abstract.] **15** (4), p. 416.  
\*f. EDNEY, J. M., 1940.—“A technique for mounting hookworms and other nematodes.” [Abstract.] **15** (4), p. 416.  
\*g. BYRD, E. E., 1940.—“The details of the excretory flame cell pattern in the trematode subfamily Gorgoderinae Looss, 1899.” [Abstract.] **15** (4), 416-417.  
\*h. BYRD, E. E., 1940.—“The morphology of the excretory system as an aid in the classification of digenetic trematodes.” **15** (4), p. 417.

#### 454—Journal of Tropical Medicine and Hygiene.

- a. HAWKING, F., 1940.—“Two cases of chyluria.” **43** (16), 218-221.

## 455—Journal of Urology.

- a. BARRETT, W. A., 1940.—“Primary echinococcosis of the kidney.” 44 (4), 389-396.

## 456—Journal of the Washington Academy of Sciences.

- a. ROTHSCHILD, M., 1940.—“*Cercaria pricei*, a new trematode, with remarks on the specific characters of the ‘Prima’ group of Xiphidiocercariae.” 30 (10), 437-448.

(456a) *Cercaria pricei* n. sp. parasitizes *Pseudosuccinea columella* Say from Washington, D.C. Infected snails behaved differently from uninfected specimens. M.R.

## 457—Journal of Wildlife Management.

- \*a. MORGAN, B. B. & WALLER, E. F., 1940.—“A survey of the parasites of the Iowa cottontail (*Sylvilagus floridanus mearnsi*).” 4 (1), 21-26.  
 \*b. CLANCY, C. F., JUNGHERR, E. & SIME, P. R., 1940.—“Internal parasites of cottontail rabbits in Connecticut.” 4 (2), 162-168.  
 \*c. SMITH, C. C., 1940.—“Notes on the food and parasites of the rabbits of a lowland area in Oklahoma.” 4 (4), 429-431.

(457a) A survey of 210 cottontail rabbits in Iowa yielded 7 helminth parasites. *Citotaenia variabilis* and *Cysticercus pisiformis* were the most common. The trematode *Hasstilesia tricolor* occurred in 11 rabbits and there were 4 nematodes—*Trichuris leporis*, *Trichostrongylus calcaratus*, *Obeliscoides cuniculi* and *Nematodirus leporis*. [From an abstract in Exp. Sta. Rec., 83, p. 791.]

P.A.C.

(457b) Clancy, Jungherr & Sime have also examined the helminth fauna of the cottontail rabbit, this time in Connecticut. They record the presence of only 4 helminths—*Obeliscoides cuniculi*, *Passalurus ambiguus*, *Citotaenia variabilis* and *Cysticercus pisiformis*. *P. ambiguus* is only found in *Sylvilagus transitionalis*, and mainly in the eastern parts of the State. The other helminths occur commonly in this species of rabbit and also in *S. floridanus mallurus*. [From an abstract in Exp. Sta. Rec., 83, p. 791.]

P.A.C.

## 458—Klinicheskaya Meditsina.

- a. VESTERMAN, N. S., 1940.—[A case of calcified cysticerciasis in man.] 18 (4), 146-147. [In Russian.]  
 b. PEREVOCHIKOVA, L. N., 1940.—[Opisthorchiasis and primary cancer of the liver.] 18 (6), 56-62. [In Russian.]  
 c. SCHWARZ, Y. E., 1940.—[The diagnosis of hydatidosis.] 18 (6), 110-120. [In Russian.]  
 \*d. LANG, G. F., 1940.—[Pathogenesis of pernicious anaemia and anaemia due to *Bothrioccephalus* infection.] 18 (9), 3-22.

## 459—Klinische Wochenschrift.

- \*a. KUSUI, K., 1940.—“Über einen Fall von Ankylostomiasis mit schweren klinischen Symptomen.” 19, p. 599.  
 \*b. RONNEFELDT, F., 1940.—“Bakteriologie und Parasitologie in Japan.” 19, 849-850.

## 460—Lancet.

- a. MANSON-BAHR, P., 1940.—“Phenothiazine as an anthelmintic in threadworm and round-worm infections.” Year 1940, 2 (612), 808-809.

(460a) Phenothiazine in doses from 30 to 40 g. was administered to 3 Indian lascars but failed to remove *Ancylostoma duodenale* which was subsequently recovered by the use of oil of chenopodium and carbon tetrachloride. It proved more satisfactory in patients with *Ascaris lumbricoides* while good and permanent results were obtained by its use in children and adults affected by *Oxyuris vermicularis*. The dosages recommended are: for children under eight, 2 g. daily for 7 days; for those under four, half this dose; and 8 g. daily for at least 5 days for adults.

R.T.L.

## 461—Magasin de Parasitologie de l’Institut Zoologique de l’Académie des Sciences de l’URSS.

- a. POSPELOVA-STROM, M. V. & STROM, J. K., 1940.—“On the parasite fauna of animals, chiefly local and migratory birds from Talysh (Transcaucasia).” 8, 7-24. [In Russian: English summary p. 24.]

- b. BYCHOWSKAYA, I. E., 1940.—“Modifications with age in the parasite fauna of the perch (*Perca fluviatilis*).” 8, 99–130. [In Russian: English summary pp. 126–130.]
- c. BYCHOWSKAYA, I. E. & BYCHOWSKY, B. E., 1940.—“The parasite fauna of the fishes of the Akhtarskie limans (delta of the Kuban, Sea of Azov).” 8, 131–161. [In Russian: English summary pp. 160–161.]
- d. SERKOVA, O. P. & BYCHOWSKY, B. E., 1940.—“*Asymphylodora progenetica* n. sp. nebst einigen Angaben über ihre Morphologie und Entwicklungsgeschichte.” 8, 162–175. [In Russian: German summary pp. 174–175.]
- e. STROM, J. K., 1940.—“Notes on the classification of the Dicrocoeliinae (Trematoda).” 8, 176–188. [In Russian: English summary pp. 187–188.]
- f. STROM, J. K., 1940.—“On the fauna of trematode worms from wild animals of Kirghisia.” 8, 189–224. [In Russian: English summary pp. 219–224.]
- g. STROM, J. K., 1940.—“New species of trematode worms of the genus *Plagiorchis*.” 8, 225–231. [In Russian: English summary pp. 230–231.]
- h. STROM, J. K., 1940.—“Eine neue Filarianart—*Diplotriaena pavlovskyi* n. sp.” 8, 232–235. [In Russian: German summary p. 235.]

(461d) Serkova & Bychowsky describe and figure *Asymphylodora progenetica* n. sp. Experimental evidence shows that this fluke has alternative life-cycles, either becoming adult in the intestine of such fish as *Rutilus* and *Carassius*, or reaching sexual maturity progenetically in the same species of snail (*Bithynia tentaculata*) as that which serves as intermediary. B.G.P.

(461e) Strom has divided Looss's genus *Hyperosomum* into three: *Hyperosomum* s.s., *Brachylecithum* n.g. with Dujardin's species *filum* as type, and *Corrigia* n.g. with Braun's *corrigia* as type. Bhalerao's subgenera *Skrjabinus* and *Lubens* are made genera, the avian species of *Eurytrema* are removed to other genera, and other minor readjustments within the Dicrocoeliinae are proposed. B.G.P.

(461f) Among 25 species of trematodes collected in Kirghisia, Strom describes the following new species: *Gorgoderina orientalis* and *Gorgodera media* from *Rana esculenta ridibunda*, *Plagiorchis upupae* from *Upupa epops*, *P. obtusus* from *Rhyacophilus ochropus*, *P. strictus* from *Hypotriorchis subbuteo*, *Pleurogenoides compactus* from *Rana esculenta ridibunda*, *Skrjabinus latus* and *S. biliosus* from *Pastor roseus*, *S. lanceatus* from *Anthus* sp., *S. similis* and *S. (?) rarus* from *Oenanthe isabellina*, and *Brachylaemus vastus* from *Pica pica hemileucoptera*. B.G.P.

(461g) Strom redescribes typical and unusually small specimens of *Plagiorchis elegans*, and also describes *P. extremus* n. sp., both from *Hypotriorchis subbuteo*, and *P. oviformis* n. sp. from *Chelidon urbica*. B.G.P.

(461h) Strom describes and figures *Diplotriaena pavlovskyi* n. sp. from the air-sacs of the charadriiform *Chettusia leucura* in Uzbekistan. B.G.P.

#### 462—Magyar Röntgen Közlöny.

- \*a. GYÖRGYI, G., 1940.—[A case of generalized cysticerciasis.] 14, 141–145.
- \*b. SCHOLTZ, A., 1940.—[Roentgenologic aspects of multilocular echinococcosis of the liver.] 14, 165–169.

#### 463—Medical Journal of Australia.

- a. SCOTT, R. K., 1940.—“A proctological problem: carcinoma of the rectum and hydatidosis of the pelvic bones.” 27th Year, 2 (24), 638–640.
- b. WOODRUFF, H. A., 1940.—“Uncommon tapeworm in a child (*Dipylidium caninum*).” [Correspondence.] 27th Year, 2 (25), p. 682.

#### 464—Medical Parasitology and Parasitic Diseases.

- a. PETROV, M. I., 1940.—“Nouveau cas de loaose humaine.” 9 (4), 407–409. [In Russian.]
- b. PLOTNIKOV, N. N., 1940.—“Contributions à la thérapeutique spécifique de l'opisthorchose.” 9 (5), 419–426. [In Russian.]
- c. AKHREM-AKHREMOVICH, R. M. & ANANINA, A. P., 1940.—“Sur la clinique et la thérapeutique de l'opisthorchose.” 9 (5), 427–431. [In Russian.]
- d. PEREVODCHIKOVA, L. N., 1940.—“Clinique de l'opisthorchose.” 9 (5), 432–433. [In Russian.]
- e. LYUBINSKI, G. A. & KULAKOVSKAYA, O. P., 1940.—“L'intensité de l'invasion et variabilité de l'*Opisthorchis felineus* (Riv. 1884).” 9 (5), 434–438. [In Russian.]

- f. ZAKHAROV, V. I., 1940.—“Épidémiologie de l'ascariose sur le littoral du Lac Balkhache.” 9 (5), 439-440. [In Russian.]
- g. LONGINOV, A. N., 1940.—“Développement des oeufs de l'*Ascaris lumbricoides* dans les gisements de tourbe de Markovo-Sbornoïe de la région d'Ivanovo.” 9 (5), 441-443. [In Russian.]
- h. TUKALEVSKI, I. M., 1940.—“Sur l'indépendance biologique des espèces *Trichocephalus suis* (Schrank, 1888) et du *Trichocephalus trichiurus* (L., 1771).” 9 (5), 444-446. [In Russian: French summary p. 446.]
- i. LONGINOV, A. N., 1940.—“Observations sur le développement des oeufs de *Trichocephalus trichiurus* (L.).” 9 (5), 447-449. [In Russian.]
- j. GORDADZE, G. I., 1940.—“Contributions à l'étude de la symptomatologie de l'Hymenolepidoïde naine.” 9 (5), 450-451. [In Russian.]
- k. MIRETSKI, O. Y., 1940.—“Application de la réaction à la floroglucine dans la pratique helminthologique.” 9 (5), p. 452. [In Russian.]
- l. PARETSKAYA, M. S., 1940.—“Diagnostic des invasions par les helminthes par la méthode de l'analyse quantitative.” 9 (5), 453-457. [In Russian.]
- m. DINNIK, Y. A. & ZVEREVA, N. S., 1940.—“Un cas de parasitisme d'un cestode du genre *Raillietina Fuhrmann* chez un enfant en Caucase.” 9 (5), 458-460. [In Russian.]
- n. ZIMA, G. G., 1940.—“La faune des helminthes de la population du village Bezstchashnoïe et de la pêcherie 'Enthousiaste' du rayon Ikriansk de la région de Stalingrad.” 9 (5), 461-462. [In Russian.]
- o. DOBROVA, M. I., 1940.—“Le travail du Detachement Helminthologique de l'Institut Tropical Rostov-sur-Don.” 9 (5), 463-464. [In Russian.]
- p. SHULMAN, E. S., PARETSKAYA, M. S., VISHNEVSKAYA, S. M., ZATURENSKAYA, B. L. & HEFT, V. M., 1940.—“Sur les ankylostomides parmi les mineurs du Donbass.” 9 (6), 623-625. [In Russian.]
- q. SHIKHOBALOVA, N. P. & SEMENOVA, N. E., 1940.—“Héxylrésorcine et son application dans la déshelminthisation pendant l'ascariose.” 9 (6), 626-629. [In Russian.]
- r. GINDTSE, M. K., 1940.—“Effectivité de l'huile de chenopodium préparé dans l'Union Soviétique pendant l'ascariose des chats.” 9 (6), 630-634. [In Russian.]
- s. MIRETSKI, O. Y., 1940.—[The radial membrane of the oncosphere of *Taenia saginata*.] 9 (6), 635-636. [In Russian.]

(464a) Petrov reports a further human case of *Loa extraocularis* infection from Daghestan. [For a review of earlier cases in Russia see Helm. Abs., Vol. IX, No. 33a.] A.E.F.

(464b) After testing various anthelmintics against *Opisthorchis* in animals Plotnikov found that Fouadin and Fouadin-concentrate gave the best results. Carbon tetrachloride is also recommended. No satisfactory results have been achieved in treating this infection in man, but it is suggested that trivalent compounds of antimony, arsenic compounds, and gold preparations are likely to be of use. A.E.F.

(464c) Lyubinski & Kulakovskaya show from experimental infection of cats that variations in the size of *Opisthorchis felineus* are proportionate to the intensity of the infection. The average length of the worms in a cat harbouring 63 *Opisthorchis felineus* was 10.6 cm., while an infection of 1,187 worms gave an average length of 5.5 cm. A.E.F.

(464d) The incidence of ascariasis in man in the Lake Balkhash district is very low. Of 2,014 persons examined only 7, i.e. 0.3%, were infected. The low incidence is due to the climate, which is not suitable for the development of ova. Of a group of 75 persons coming into this region 16 were found to be infected with ascaris six months after their arrival; after a further 10 months the infection had disappeared without treatment. A.E.F.

(464e) During the summer months Ascaris ova developed in red peat (which is dryer but warmer) in one month; in black peat (moister but colder) in 2 months. By comparison, in a mineral soil (dryer and warmer than peat) Ascaris ova developed in 1½ to 3 months. A.E.F.

(464f) Pigs could be infected experimentally with ova of *Trichuris trichiura* but the worms did not reach sexual maturity; this was also the case in man infected with *T. suis*. Tukaleski concludes from this that the two species are biologically independent. A.E.F.

(464g) Longinov has carried out experiments at Ivanovo (150 miles north east of Moscow) to determine the stage of development reached by *Trichuris trichiura* ova in soil during the summer months (July to September). Eggs were left for about 2 months in black soil, sand, clay, and peat bogs at various depths from 1 to 19 cm. It was found that eggs developed only

in clay soil at depths of 9 and 14 cm. ; in other soils they either died or did not develop fully.

A.E.F.

(464k) Miretski recommends a phloroglucinol staining method for the detection of helminths among vegetable material in faeces. After exposure to phloroglucinol (2-5% in 96% alcohol) for 1 or 2 minutes, the smears are dried with filter paper, covered with hydrochloric acid for 2 minutes, redried and the coverslip applied on a few drops of water. All vegetable material stains red.

W.P.R.

(464l) Paretskaya compares various techniques for quantitative examination of faeces for helminth ova. She describes her modification of Lane's D.C.F., which is claimed to be simpler and quicker, and to show at least 50% more eggs than the original method ; the main feature of the modification is the examination of sediment as well as float [the eggs in question were probably *Trichuris*, but this is not stated]. A table shows the ratio between the number of *Trichuris* females in the intestine and number of eggs per g. of faeces, as determined by different techniques. Paretskaya found that "Osarsol" [a Russian arsenic preparation resembling Stovarsol] was 95% successful against *T. trichiura* in a series of human cases. A.E.F.

(464m) Dinnik & Zvereva describe and figure the segments from a fragment of a *Railletina* sp. recovered from an 8-year-old boy at Armavir (Caucasus). They consider it to be practically identical with *R. asiatica* (Linstow), but owing to the very inadequate descriptions of this species available, are unable to make a specific diagnosis.

A.E.F.

(464n) Examination of 178 children in a village in the Stalingrad region showed 75 to be infected with *Enterobius*, 2 with *Ascaris* and 1 with *Trichuris*. Of 156 adults examined at the same time only 5 had helminthic infections : one case each of *Enterobius*, *Trichuris* and *Taenia* sp. and 2 cases of *Hymenolepis nana*.

A.E.F.

(464p) In the summer of 1939 extensive helminthological surveys were made among miners in the Donbass region (Ukraine). A total of 32,620 miners were examined, and of these 31 were infected with *Ancylostoma duodenale*. Other helminths found were : *Trichuris trichiura* in 11.8%, *Ascaris* in 2%, *Enterobius* in 10.6%, and *Hymenolepis nana* in 1.5%. It is recommended that thorough helminthological surveys should be made each summer in mines with a temperature of over 20° C., and that sanitary arrangements in mines should be improved.

A.E.F.

(464q) Shikhobalova & Semenova have tested hexylresorcinol against ascariasis in 446 human cases. The dosage was 1.0 to 1.5 g. for adults, 0.1 g. for children up to one year, and 1.0 g. for children between 10 and 12 years. The treatment was 74% successful. A.E.F.

(464r) Chenopodium oil was found to be 95% successful against ascariasis when administered to cats in a dose of 0.1 g. per kg. body weight. It was very toxic, however, and 14% of the cats died during the experiments. Smaller doses (0.05 g., 0.025 g. and 0.01 g. per kg. body weight) were respectively 81%, 57% and 42% successful.

A.E.F.

#### 465—Medicina. Kaunas.

- ROZENGOLCAS, I. M., 1940.—"Miroslavo apylinkės pradžios mokyklu mokiniai helminthologiniu tyrimu duomenys." 21 (11), 912-920. [German summary p. 920.]
- RÖZENGOLČAS, I. M., 1940.—"Strongyloides stercoralis atsikimas Lietuvoje." 21 (11), 920-924. [German summary p. 924.]

(465a) [Further helminthological studies among school children in the Miroslavas district.]

(465b) [A case of *Strongyloides stercoralis* infestation in Lithuania.]

#### 466—Medicina. Madrid.

- SANZ EXTREMERA, L. & SANZ EXTREMERA, E., 1940.—"La intradermoreacción de Casoni no debe practicarse sistemáticamente antes que la reacción de Weinberg ; valor diagnóstico de cada una de estas reacciones biológicas y de la eosinofilia en el quiste hidatídico." 8, 28-34.

## 467—Medizinische Klinik.

- a. UTZ, F., 1940.—“ Beitrag zur Diagnose des infiltrierend wachsenden Echinokokkus unter besonderer Berücksichtigung des Zusammenhangs mit Unfall.” 36 (28), 777-779.

## 468—Mémoires de l'Académie de Chirurgie.

- \*a. DUVAL, P., 1940.—“ Kyste hydatique de la convexité du foie. Intervention par voie intrapleurale libre. Guérison.” 66, 589-591.  
 \*b. BERGERET, A. & RACHET, J., 1940.—“ Ictère par rétention. Cholécystite calculeuse. Obstruction du cholédoque par deux vésicules hydatiques.” 66, 617-621.

## 469—Memorias do Instituto Oswaldo Cruz.

- \*a. MAGALHÃES, A. ET AL., 1940.—“ Estudos sobre a esquistosomose em Pernambuco, Brasil.” 35, 205-283.

## 470—Minerva Medica. Torino.

- \*a. GASBARRINI, A., 1940.—“ Cisti da echinococco del polmone od aneurisma aortico ? ” 2, 537-539.

## 471—Mitteilungen aus dem Gebiet der Lebensmitteluntersuchung und Hygiene.

- \*a. BORNAND, M., 1940.—“ L'hygiène dans la lutte contre les maladies parasitaires.” 31, 320-331.

## 472—Monatsschrift für Kinderheilkunde.

- \*a. BRÜNING, H., 1940.—“ Eingeweidewürmer bei Kindern (Sammelreferat 1939 1940).” 84, 371-377.

## 473—Münchener Medizinische Wochenschrift.

- \*a. OELKERS, H. A., 1940.—“ Ueber die Giftigkeit von Wurmmitteln in öliger Lösung oder wässriger Emulsion.” 87, 1026-1028.

## 474—Natural and Applied Science Bulletin. University of the Philippines.

- \*a. REFUERZO, P. G., 1940.—“ Arthropod intermediate hosts of *Acuaria hamulosa* in the Philippines, I.” 7 (4), 407-414.

## 475—Nederlandsch-Indische Bladen voor Diergeneeskunde en Dierenteelt.

- a. SEIJFFERS, S. M., 1940.—“ De trichinenbestrijding in de Afdeeling Bataklanden der Residencie Tapanoeli.” 52 (4 5), 222-244.  
 b. HOEK SPAANS, C., 1940.—“ Overzicht over de in 1939 bij geimporteerde Etawah's waargenomen ziekten en de resultaten der behandeling.” 52 (6), 381-402. [English summary p. 402.]

(475a) Seijffers tabulates the results of Trichinella inspection of pigs at slaughter-houses in the Batakland District, Sumatra, from 1930 to 1939. The incidence of Trichinella in male, female and castrated pigs, and the age of infected animals, are shown. Figures are also given for the incidence in dogs. Examination of rats for Trichinella having proved consistently negative it is concluded that this animal plays no part in the spread of infection in the Dutch East Indies. Seijffers emphasizes the potential danger to man and points out that the absence of any record of trichinelliasis in man in the Dutch East Indies does not preclude its existence in a sub-clinical form. The adoption of more stringent measures to control the parasite is urged.

A.E.F.

(475b) Of 177 goats which had been shipped from India to the Dutch East Indies, 17 were infected with helminths. There were 12 cases of trichostrongylosis, 2 of coenuriasis, 1 of ascariasis and 2 of tapeworm infection.

A.E.F.

## 476—New England Journal of Medicine.

- a. WELCKER, M. L., KANEE, G. D. & GOODALE, R. H., 1940.—“ Primary echinococcal cyst of the uterus.” 223 (15), 574-576.

## 477—New Jersey Agricultural Experiment Station. Hints to Poultrymen.

- a. BEAUDETTE, F. R., 1940.—“Internal parasites of birds.” 27 (5), 4 pp.; (6), 4 pp.

## 478—New Zealand Journal of Science and Technology.

- a. GARRETT, H. E., 1940.—“Lamb and hogget drenching trials in Canterbury, 1938-39.” 22 (2), 110-115.

(478a) Garrett reports on drenching some 220 lambs or hoggets with 1 or  $1\frac{1}{2}$  oz. of 2%  $\text{CuSO}_4 + 2\%$  nicotine sulphate, repeated at 10 to 14 day intervals. Drenching produced healthier lambs showing a 1 lb. per month increase in live weight over the controls. There is an indication that 8 mg. cobalt per lamb per drench gives an enhanced effect. B.G.P.

## 479—New Zealand Medical Journal.

- a. BARNETT, L., 1940.—“The incidence of hydatid disease in New Zealand and elsewhere.” 39 (214), 330-338.

(479a) Contributing his annual article on the incidence of hydatid in New Zealand, Barnett reports 115 human hospital cases during 1939 with a mortality rate of about 15%. Incidence in sheep and cattle (nearly 50%) and of the adult tapeworm in dogs (one-third or more), remains high. New Zealand's annual total of human cases is exceeded only by Uruguay, Argentina, and Australia. B.G.P.

## 480—Norsk Magasin for Laegevidenskapen.

- a. HOLTA, O., 1940.—“Cerebral cysticerkose.” Årgang 101, published in Nordisk Medicin, 8 (48), 2245-2248. [German summary p. 2248.]

## 481—Norsk Veterinaer-Tidsskrift.

- \*a. THORSHAUG, K., 1940.—“Trikinose i Norge.” 52 (11), 475-492.

(481a) Thorshaug reports the finding of *Trichinella* in foxes in Norway, and examination of rats found on the fox farm concerned showed that 75% were infected with *Trichinella*. Of 264 rats from 2 fox farms and an abattoir near Oslo 20, i.e. 7.56%, harboured *Trichinella*. Cats from the neighbourhood of fox farms were also examined and 2 out of 31 were infected. The author attributes the incidence of *Trichinella* in Norway to the imports of American pork, and also to importation of fur-bearing animals. The important role played by foxes and rats in the spread of trichineliasis is stressed. [From an abstract in Skand. Vet.-Tidsskr., 30, 1263-1265.] A.E.F.

## 482—Ohio State Medical Journal.

- a. INGLING, H. H., 1940.—“Clinical study of intestinal parasites.” 36 (10), 1083-1085.

## 483—Okayama-Igakkai-Zasshi.

- \*a. MIYAZIMA, T., 1940.—“Über die austreibende Wirkung gegen *Ascaris* von Santonin.” 52, p. 2156.  
\*b. KUYAMA, S., 1940.—“In regard to the embryonic development of *Metagonimus takahashii* and *M. yokogawai*.” 52, p. 2310.

## 484—Oto-Rhino-Laryngologia.

- a. YAMAZAKI, M., 1940.—“Über die Invasion des Pharyngolarynx von der Larve des *Ancylostoma caninum*.” 13 (12), 976-978. [In Japanese: German summary pp. 72-73.]

(484a) Yamazaki has studied the migration which follows the administration of sheathed infective larvae of *Ancylostoma caninum* in the food of dogs. He shows that these invade the epithelial layer and parenchymatous follicles of the pharynx after about 10 minutes. No larvae were found in the larynx during the first 6 hours, but they were present in increasing numbers after 24 hours, and became most numerous on the 2nd or 3rd day in the epiglottis, and the meso- and hypolarynx, showing that the air passages are a possible route of invasion. R.T.L.

## 485—Pacific Rural Press.

- \*a. DAY, L. H. & TUFTS, W. P., 1940.—“Nematode resistant deciduous rootstocks.” **140** (10), p. 314.

## 486—Peking Natural History Bulletin.

- a. HU, S. M. K., 1940.—“Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Brug. I. *Culex pipiens* var. *pallens* Coquillett.” **15** (1), 87-91.
- b. HU, S. M. K., 1940.—“Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Brug. II. *Culex tritaeniorhynchus* Giles.” **15** (2), 93-96.
- c. HU, S. M. K., 1940.—“Studies on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Brug. III. *Anopheles hyrcanus* var. *sinensis* Wiedemann.” **15** (2), 97-101.
- d. HSU, Y. C., & HSU, H. S., 1942.—“Effects of chemical reagents on the development of eggs in *Ascaris lumbricoides* Linn.” **15** (2), 103-118.
- e. KU, C. T., 1940.—“Studies on the genus *Prosthogonimus* of the domestic duck in Kunming.” **15** (2), 119-131.
- f. KU, C. T., 1940.—“Notes on *Plagiorchis* (M.) *multiglandularis* Semenow, 1927 in the intestine of a dark hoopoe in Kunming.” **15** (2), 133-134.
- g. FORTUYN, A. B. D. & FENG, L. C., 1940.—“Inheritance in mice of the resistance against infection with eggs of *Taenia taeniaeformis*.” **15** (2), 139-145.

(486a) In this first paper of a series dealing with the susceptibility of various mosquitoes to infection with *Microfilaria malayi* in Shanghai, Hu considers *Culex pipiens* var. *pallens*. He finds that it is not strongly susceptible to infection, for out of 209 specimens, used experimentally, only 5 became positive carriers: four of these only carried a single parasite and the other one only two, yet the patient from which the insects were fed showed heavy infections in the circulating blood. He suggests, however, that the low susceptibility may be to some extent offset by the abundance of this species which is the predominant species in this district at the end of July and has a long breeding season extending from March to December. P.A.C.

(486b) Continuing his observations on the susceptibility of Shanghai mosquitoes to experimental infection with *Microfilaria malayi* Hu has attempted to infect 132 *Culex tritaeniorhynchus* reared in the laboratory but only two became positive carriers and each carried only a single larva. This species never seems to be the dominant household mosquito in Shanghai though they represent over 5% of the mosquito fauna at the end of July and beginning of August. It may therefore be of some minor importance in spreading disease. P.A.C.

(486c) Hu has examined *Anopheles hyrcanus* var. *sinensis* as a possible vector of *Microfilaria malayi* in Shanghai and finds that it is highly susceptible to infection. Of 34 specimens used experimentally 33 became positive. As it is one of the most common domestic mosquitoes he points out that it probably plays an important role in spreading disease. Some of the insects showed over 40 nematode larvae after being fed on a patient with a moderately heavy load in the circulating blood. P.A.C.

(486d) Hsu & Hsu have studied the effects of certain reagents on the development of *Ascaris lumbricoides* eggs. Phenol, which was effective in 1% solution, was the best ovicide examined. Sulphuric acid and nitric acid solutions were toxic above a 1% concentration but eggs developed fairly normally in acetic acid, hydrochloric acid and formalin solutions up to 10%. Sodium hydroxide was more toxic than the acids. It is considered that the effects of the chemicals on the eggs was largely determined by the permeability of the egg coverings. The optimum developmental temperature was 30° to 34° C. Eggs would not hatch at temperatures above 32° C. W.P.R.

(486e) Ku has recovered 6 species of *Prosthogonimus* from domestic ducks in the neighbourhood of Kunming. He redescribes *P. cuneatus*, *P. pellucidus*, *P. horiuchii* and *P. orientalis*. There are two new species: *P. sinensis* n. sp., recovered from the oviduct and recognized by the position of the acetabulum which lies immediately behind the intestinal fork, the position of the vitellaria, the coiled shape of the cirrus sac and the size of the eggs; and *P. penni* n. sp. from the bursa fabricii, possessing a very long cirrus sac. He has worked out a comparison of the characters of this genus in tabular form and gives a key for the easier identification of the species. P.A.C.

(486f) Ku has recovered *Plagiorchis (M.) multiglandularis* from *Upupa epops saturata* in Kunming. It is a new host and a new geographical record. He redescribes the species, clearing up certain points which were previously obscure.

P.A.C.

(486g) Using two inbred strains, Fortuyn & Feng show again that not all strains of mice are equally susceptible to infection with eggs of *T. taeniaeformis* and in one particular strain the female of the species was less resistant than the male. Crossing of the two strains leads to offspring which tend to be resistant but the lower resistance of the female was apparent in the hybrid. Development in the hybrid mice was often incomplete, producing abortive cysts appearing as spots in the liver. There were often no real cysts. In the parent strains, however, infected livers often showed real and abortive cysts together. It was uncommon to find only aborted cysts. The authors find that not all suspensions of eggs are equally infective, a fact which has led to certain irregularities in their experimental results.

P.A.C.

#### 487—Philippine Journal of Animal Industry.

- a. YUTUC, L. M., 1940.—“A note on resistance studies with the nematode, *Nippostrongylus muris* (Yokogawa, 1920) in laboratory piebald rats.” 7 (2), 147-152.
- b. JESUS, Z. DE & CABRERA, D. J., 1940.—“Anthelmintic value of tobacco midrib powder mixed with the daily feed mash of infected chickens.” 7 (3), 251-262.
- c. REFUERZO, P. G., 1940.—“Some helminths of dogs and cats transmissible to man in the Philippines, with reference to their methods of transmission and prevention.” 7 (6), 493-524.

(487a) Yutuc has evidence to show that the age of an animal plays a part in its resistance to infection with *Nippostrongylus*, for the development of resistance is slow in young animals and death often occurs. He was able to induce considerable resistance following an initial infection of 50 living larvae per g. of body weight, and the evidence suggests that the resistance is largely localized in organs which actually harbour the parasite in the course of its travels through the body.

P.A.C.

(487b) Jesus and Cabrera dried and powdered midribs of tobacco leaves, which so far have no economic value, and used the resulting powder as a vermicide for chickens. It is useful for expelling both tapeworms and roundworms, particularly when used in conjunction with a saline purge. It is practical and efficient and has the further advantages that it does not depress egg laying nor taint the flesh.

P.A.C.

#### 488—Philippine Journal of Science.

- a. VASQUEZ-COLET, A. & AFRICA, C. M., 1940.—“Morphological studies on various Philippine heterophyid metacercariae with notes on the incidence, site, and degree of metacercarial infection in three species of marine fish.” 72 (4), 395-419.

(488a) Vasquez-Colet & Africa are able to identify the species of heterophyid parasites in the Philippines from the metacercariae encysted in fish. They were also able to identify the species of some other trematodes in the metacercaria stage. There is a very abundant trematode fauna, if the richness of the metacercariae parasitizing fishes is a fair index.

P.A.C.

#### 489—Plant Disease Reporter. Supplement.

- †a. BARRONS, K. C., 1940.—“Inducing uniform soil infestations of the nematode *Heterodera marionii* as an aid in breeding for resistance to root-knot.” [Abstract.] No. 124, 138-139.
- †b. BUHRER, E. M., 1940.—“Remarks on additions to a list of hosts of the root-knot nematode.” [Abstract.] No. 124, p. 139.
- †c. COLE, C. A., 1940.—“The bulb nematode (*Ditylenchus dipsaci*) in narcissus plantings in Western Oregon.” [Abstract.] No. 124, 140-141.
- †d. GODFREY, G. H., 1940.—“Hot water treatment for the control of nematodes in woody plants.” [Title.] No. 124, p. 141.
- †e. GROSS, A. E., 1940.—“Controlling root-knot nematodes in potatoes in the Klamath Basin by means of irrigation.” [Abstract.] No. 124, p. 142.
- †f. McBETH, C. W., 1940.—“A comparison of the root-knot nematode and the meadow nematode.” [Abstract.] No. 124, p. 144.
- †g. SHERBAKOFF, C. D., 1940.—“Recent field observations on tomato and cotton root-knot nematodes.” [Abstract.] No. 124, p. 146.

† Paper presented at the 3rd National Plant Nematode Conference, Birmingham, Alabama, February 1940.

- \*b. TAYLOR, A. L. & SMITH, A. L., 1940.—“Nematode population and species determination studies on soils from the regional cotton wilt plots.” [Abstract.] No. 124, 147-148.
- \*i. WADE, B. L., 1940.—“Nematode studies at U.S. regional vegetable breeding laboratory.” [Abstract.] No. 124, p. 149.

(489a) Difficulty has been experienced in ensuring that plots used for root-knot resistance trials shall be uniformly infected with eelworm. The mixing of a quantity of root-knot inoculum with the soil at the site of planting of tomatoes or beans gave more uniform results than when a natural infection only was present. Absolutely uniform infestation throughout a plot was never obtained. M.T.F.

(489b) Fifty-five new hosts have been added to the list since 1938, bringing the total to 1,387 species representing 125 families. [For the 1938 list see *Helm. Abs.*, Vol. VII, No. 381a.] M.T.F.

(489c) Cole gives particulars of the practice followed in hot-water treatment of narcissus bulbs in Western Oregon where narcissi are an important commercial crop. Hot-water treatment for 2½ hours at 110° to 111.5° F. was found to be ineffective so the time was increased to 4 hours but this did not always produce a complete kill. The latest method is to give a presoak in water at 70° F. for not less than 1 hour followed by a precook at 110 to 111.5° F. for 45 minutes and then the 4 hour treatment at the same temperature in dilute formaldehyde; 1 pint of formaldehyde to 35 gallons of water. Mention is made of the fact that it is almost impossible to free bulbs of Chinese Lily and Paper White Narcissus from infestation. T.G.

(489e) There was a slight reduction in the percentage of infected potato tubers grown in land irrigated every 2 or 3 days as compared with those grown where irrigation was carried out at intervals of 4 to 9 days and where the soil temperature was consequently somewhat higher. The necessity for a better technique for this method of control is indicated. M.T.F.

(489f) McBeth demonstrates how larvae of the meadow and the root-knot nematodes, when observed in stained roots, may be distinguished by differences in morphology and position in the host root. M.T.F.

(489g) No root-knot was found on any of several varieties of tomato grown in 1939 on land where cotton was unaffected in 1938 but tomatoes were severely infected in 1937. Tomatoes were severely affected in another field where cotton had been grown for several years and was infected in 1938. M.T.F.

(489h) Taylor & Smith report on the examination of soil samples from 12 regional cotton wilt plots for the presence of *Pratylenchus pratensis*. Large numbers of the eelworm were found in samples from some areas, few in others and none in others. There was no correlation between the presence of *P. pratensis* and the 3 year averages of mid-season wilt percentages. T.G.

(489i) Wade states that at Charleston, South Carolina, nematode infestation of plants is mainly confined to greenhouses. Where infection of a crop plant occurs, search is made for varietal or strain differences in response to attack. Attempts are being made to combine the nematode resistance of Alabama No. 1 pole bean with bacterial blight and mosaic resistance of other varieties. T.G.

#### 490—Policlinico (Sezione Chirurgica).

- \*a. RAČIĆ, J., 1940.—“Sull’echinococco in Dalmazia. Esperienze personali in base a 411 casi operati.” 47, 287-300.

#### 491—Policlinico (Sezione Pratica).

- \*a. AGOSTINELLI, E., 1940.—“Contributo alla conoscenza dell’ascaridiasi chirurgica.” 47, 1169-1178.
- \*b. COLUCCI, C., 1940.—“Contributo alla conoscenza dell’ascaridiosi chirurgica.” [Comment on Agostinelli’s article.] 47, 1507-1508.
- \*c. MONA, C., 1940.—“Ascaridiosi e sindrome appendicolare cronica d’emblée.” 47, 1899-1904.

† Paper presented at the 3rd National Plant Nematode Conference, Birmingham, Alabama, February, 1940.

## 492—Prensa Médica Mexicana.

- \*a. CASTREJON, A., 1940.—“El microproyector aplicado al examen parasitoscópico de materias fecales.” 5, 144-145.

## 493—Proceedings of the Indiana Academy of Science.

- \*a. HEADLEE, W. H., 1940.—“Intestinal parasitism in a group of university students.” 49, 227-230.

## 494—Proceedings of the Linnean Society of New South Wales.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1940.—“New and known nematodes from Australian marsupials.” 65 (5/6), 468-476.

(494a) Johnston & Mawson have examined material from various parts of Australia, and report the following new host records and new species of nematodes from marsupials, arranged under hosts. From *Lagorchestes hirsutus*; *Zoniolaimus communis*: from *Macropus dorsalis*; *Pharyngostrongylus theta*, *Cloacina similis*, *C. digitata* n. sp. and *Zoniolaimus longispicularis*: from *M. fuliginosus*; *Dipetalonema roemerii*: from *M. major*; *Cloacina communis*: from *M. parma*; *Parazoniolaimus collaris*, *Pharyngostrongylus alpha*, *P. gamma*, *P. delta*, *Coronostrongylus coronatus*, *Cloacina thetidis*, and *Buccostrongylus buccalis*: from *M. robustus*; *Pharyngostrongylus beta*: from *M. ruficollis*; *Cloacina linstowi* n. sp., *C. similis*, *C. thetidis* and *Coronostrongylus coronatus*: from *M. tasmaniensis*; *Zoniolaimus longispicularis*: from *M. thetidis*; *Zoniolaimus onychogale*, *Cyclostrongylus mediocannulatus* n. sp. and *Dipetalonema* sp.: from *M. ualabatus*; *Cloacina gallardi* n. sp., *Globocephaloïdes thetidis*, and *Astrostrongylus aggregatus* n. sp.: from *Peragale minor*; *Subulura peragale* n. sp., *Physaloptera thalacomys* n. sp.: from *Perameles nasuta*; *Physaloptera parvicollaris* n. sp., *Echinonema cinctum*, and *Dipetalonema* sp.: from *Sarcophilus harrisii*; *Physaloptera sarcophili* n. sp.: from *Trichosurus caninus*; *Dipetalonema trichosuri*: from a bandicoot; *Physaloptera papuensis* n. sp. A.E.F.

## 495—Proceedings of the Moscow Zoological Park.

- a. NAUMOV, S. P., 1940.—“Parasitic invasions of *Lepus timidus* L. and their dependency of local conditions.” 1, 185-201. [In Russian: English summary p. 201.]  
 b. PETROV, A. M., 1940.—“Parasitic worms of Mustelidae of the Moscow Zoological Gardens.” 1, 202-231. [In Russian: English summary pp. 230-231.]  
 c. TROFIMOV, V. N., 1940.—“Parasitic worms of the urial (*Ovis vignei* Blyth) of the Moscow Zoological Gardens.” 1, 232-234. [In Russian: English summary p. 234.]  
 d. SCHULZ, N. G., 1940.—“Lungworms from *Ovis polii karelini* Blyth.” 1, 235-242. [In Russian: English summary p. 242.]  
 e. SCHULZ, N. G., 1940.—“Methods of individual coprological investigations of animals maintained in groups.” 1, 243-246. [In Russian: English summary p. 246.]  
 f. SCHULZ, N. G., 1940.—“Experimental study of the treatment of ascaridosis of large Carnivora of the Moscow Zoological Park. (Preliminary communication).” 1, 247-259. [In Russian: English summary pp. 258-259.]

(495a) Naumov found that the most common parasites of hares in northwest Russia were *Synthetocaulus* spp., *Trichostrongylus retortaeformis* and *Graphidium strigosum*. Infections with trematodes and cestodes were rare and insignificant. Infections were more severe in damp soils in thickly wooded districts. A.E.F.

(495b) Petrov lists the helminths recorded from Mustelidae, including material from the Moscow Zoo collected during 1927 to 1936. *Strongyloides maritis* n. sp. is described from *Martes zibellina*, and there is a detailed redescription of *Taenia hydatigena*. A bibliography of 93 references is appended. A.E.F.

(495c) Trofimov has examined 8 *Ovis vignei* (Punjab wild sheep) which died at the Moscow Zoo; he found 8 species of nematodes and 2 of cestodes. There was no new species. Most of the animals apparently became infected in the Zoo. A.E.F.

(495d) Schulz has examined material from 7 specimens of *Ovis polii* (Siberian wild sheep) which died in the Moscow Zoo. He found 6 nematodes, 1 trematode and 1 cestode, none of which was new. A.E.F.

(495e) Schulz shows that the faeces of an individual animal living with a group may be easily identified if the animal is given a small quantity of cereal with its food on the day preceding faecal examination. Specimen quantities of cereal are 15 g. for lions and tigers and 30 g. for bears. It is admitted that it is sometimes difficult to get animals to eat a cereal. A.E.F.

496—Proceedings of the Transvaal Mine Medical Officers' Association.

- a. VERMOOTEN, V., 1940.—“Bilharzia as seen by the urologist.” 20 (221), 11-16.

497—Publications of the Carnegie Institution of Washington.

- \*a. MANTER, H. W., 1940.—“Gasterostomes (Trematoda) of Tortugas, Florida.” No. 524 [Papers from the Tortugas Laboratory, Vol. 33], pp. 1-19.

(497a) Among the gasterostomes from marine fishes recorded by Manter at Tortugas, Florida, the following are new: *Bucephalus priacanthi* n. sp. from *Priacanthus arenatus*, *B. scorpaenae* n. sp. from *Scorpaena plumieri*, *Dolifustrema gracilidum* n. sp. from *Gymnothorax moringa*, *Prosrhynchus altanticus* n. sp. from *Myceteroperca* spp., *P. promicropsi* n. sp. from *Promicrops itaiara*, *Rhipidoctyle nagatyi* n. sp. from *Euthynnus alletteratus*, *R. barracudae* n. sp. from *Sphyraena barracuda*, and *R. adbaculum* n. sp. from *Scomberomorus regalis*. [From Zool. Rec., 77, Vermes Section, No. 769.] A.E.F.

498—Puerto Rico Journal of Public Health and Tropical Medicine.

- a. KRAKOWER, C. A., 1940.—“Some observations of the effects of physical and chemical agents on the cercariae of *Schistosoma mansoni*.” 16 (1), 26-44. [Also in Spanish pp. 45-65.]  
\*b. KRAKOWER, C., HOFFMAN, W. A. & AXTMAYER, J. H., 1940.—“The fate of schistosomes (*S. mansoni*) in experimental infections of normal and vitamin A deficient white rats.” 16, 269-345.

(498a) Krakower found that the cercariae of *Schistosoma mansoni* could withstand refrigeration at 5° to 6° C. for 4 to 6 days and remain infective when the temperature was raised. Some remained alive after refrigeration for 13 days. The thermal death point was 6 hours at 40° C. or 30 minutes at 45° C. Ultraviolet light (an alpine lamp operating at 5 ma. at a distance of 75 cm.) and strong sunlight were lethal in 45 minutes. In water below a hydrogen atmosphere the cercariae lived for 6½ hours only. Ranges in pH between 4.6 and 11.0 were harmless. Sodium chloride solutions below 0.6° were without effect, 0.6 to 1.0° solutions restricted movements and lowered infectivity, while 1.5° solutions rapidly killed cercariae. Results obtained with other chemicals are listed. Potassium and calcium were toxic when the concentration reached 0.1 g. per 100 c.c. Barium chloride was highly toxic. The practical and theoretical importance of the results is discussed. W.P.R.

499—Rassegna Internazionale di Clinica e Terapia.

- \*a. CROVERI, P. & ZANCAN, B., 1940.—“Considerazioni cliniche sulla bilharziosi o schistosomiasi vescicale.” 21, 616-629.

500—Records of the Indian Museum.

- a. MAPLESTONE, P. A., 1940.—“Two new nematodes from the Nicobar pigeon and the common sandpiper.” 42 (3), 425-429.  
b. BHADURI, N. V. & MAPLESTONE, P. A., 1940.—“Variations in *Taenia gaigeri* (Hall, 1919).” 42 (3), 431-435.  
c. SUBRAMANIAN, M. K., 1940.—“On a new species of *Echeneibothrium* from *Rhinobatus granulatus* Cuv.” 42 (3), 457-464.

(500a) Maplestone describes and figures *Ornithostrongylus nicobarica* n. sp. from the intestine of a Nicobar pigeon, *Caleonias nicobarica nicobarica*, and *Thelandros avis* n. sp. from the intestine of the sandpiper *Tringa hypoleucus*. A.E.F.

(500b) Bhaduri & Maplestone draw attention to the wide variation from the normal that may occur in *T. gaigeri* among all the morphological features generally used for diagnosis, e.g. size of the hooks, number of testes and segment shape. Had some of these variations occurred in isolated specimens the question of specific identity could have arisen but they

appeared in a large bulk of material so that they could be assessed at their true value. They suggest that such wide variation may occur in other species of *Taenia* and that future surveys of canine forms may result in a reduction in the number of *Taenia* spp. P.A.C.

(500c) Subramanian describes and figures *Echeneibothrium oligotesticularis* n. sp. from *Rhinobatus granulatus*. The small number of testes (4 to 7) differentiate the new species from *E. flexile* (18 to 20 testes). A.E.F.

**501—Report of the Chief of the Bureau of Animal Industry. United States Department of Agriculture.**

- a. UNITED STATES. BUREAU OF ANIMAL INDUSTRY, 1940.—[Report of the Zoological Division.] Year 1939-1940, pp. 74-90.

(501a) The Zoological Division of the Bureau of Animal Industry briefly reports on the following subjects: phenothiazine against horse strongyles; the bionomics of the cattle-fluke and its intermediary in Texas; the dystrophic effect of Moniezia in young lambs; Oesophagostomum infestations in sheep; the effects of experimental infestations of stomach-worm and lungworm in calves; trichinosis in pigs (garbage-versus grain-feeding, skin-tests in pigs, trichinæ in various organs and in pork products); lungworm, thorn-headed worm, hookworm and kidney-worm in pigs; the effects of the swine sanitation system; *Hymenolepis carioca* in chickens; Strongyloides in dogs; prophylactic sanitation for chickens; phenothiazine against the nematodes of sheep, horses, goats, calves and pigs; 116 anthelmintics against tapeworms in chicken; progress with the Index Catalogue. B.G.P.

**502—Revista Argentina de Urología.**

- \*a. MATHIS, R. I., 1940.—“Quistes hidáticos retrovesical e intraperitoneal.” 9, 417-424.

**503—Revista de Chirurgie si Bulletins et Mémoires de la Société de Chirurgie de Bucarest.**

- \*a. MARIAN, I., VEREANU, D. & POPESCO HERASCA, 1940.—“Deux kystes hydatiques pulmonaires du lobe supérieur droit, chez un enfant. Opération. Guérison.” 43, 368-371.

**504—Revista de Cirugía de Buenos Aires.**

- \*a. GOÑI MORENO, I., 1940.—“Pneumotórax hidatídico.” 19, 165-184.  
\*b. LAGOMARSINO, E. H., 1940.—“Quiste hidatídico del mediastino anterior; seudotuberculosis hidatídica; hidatidosis de la pelvis ósea.” 19, 444-469.

**505—Revista de la Facultad de Medicina. Bogotá.**

- \*a. OVALLE QUINTERO, F., 1940.—“Un portador de microfilarias.” 9, 377-379.

**506—Revista Fluminense de Medicina.**

- \*a. MACHADO, O., 1940.—“Pesquisa helmintologica nas carnes.” 5, 219-223.  
\*b. MACHADO, O., 1940.—“Um caso de apendicite por *Enterobius*, com centenas de parasitos no interior do orgão.” 5, 277-278.

**507—Revista del Instituto de Salubridad y Enfermedades Tropicales. Mexico.**

- a. OSORIO E., M. T. & MAZZOTTI, L., 1940.—“Examen de niños en tres instituciones escolares para investigar la presencia de oxiuros.” 1 (3), 265-273. [English summary p. 273.]

(507a) The authors found an incidence of 51.6% of *Enterobius vermicularis* in 684 scholars in three school institutions in Mexico, one NIH swab per pupil only having been examined. At two boarding schools 48.8% of 493 boys and 68.3% of 101 girls, and at one day school 40.0% of 45 boys and 53.3% of 45 girls, were positive. Tables give the age and sex incidence of children examined, and of positives. M.R.Y.

**508—Revista Medica da Bahia.**

- \*a. FIGUEIREDO, J. DE, 1940.—“Elmintoses e suas consequencias.” 8, 337-344.

## 509—Revista Medica de Pernambuco.

- \*a. HENRIQUES, J., 1940.—“Complicações cirúrgicas da ascaridiose.” 10, 194-197.
- \*b. ALFREDO, J., 1940.—“Ascaridiose e anomalia anatômica das vias biliares extrahepáticas.” 10, 317-322.

## 510—Revista Médica Peruana.

- a. STIGLICH G., G., 1940.—“Distomatosis hepática.” 12 (141), 311-322.

## 511—Revista de Medicina. São Paulo.

- a. MEIRA, J. A., 1940.—“Sobre a reação de Takata na esquistosomiasis mansônica.” 24 (81), 44-58. [English summary p. 56.]

(511a) Meira has examined the efficiency of a modification of the Takata test on 23 patients with clinical schistosomiasis. He finds that the test may give a positive result in advanced cases when cirrhosis has set in. However, negative results do not necessarily mean that hepatic lesions are absent, for the action probably depends on certain protein changes in the serum. He thinks that further work on these lines may evolve a useful method of determining the hepatosplenic form of the disease.

P.A.C.

## 512—Revista de Medicina y Ciencias Afines. Buenos Aires.

- \*a. GRIMALDI, F. E., 1940.—“Quiste hidático retro-vésical; su tratamiento quirúrgico por el procedimiento de Posadas.” 2, 840-842.

## 513—Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio.

- a. STUNKARD, H. W., 1940.—“Tapeworm infection in the West Indies.” 6 (56), 283-288.

(513a) *Inermicapsifer cubensis* and *Bertiella studeri* have in recent years been reported several times from children and young adults in the West Indies. Both are probably transmitted by oribatid mites. They are probably normal parasites of lower mammals and these human infections are incidental.

R.T.L.

## 514—Revista de Medicina Veterinaria. Buenos Aires.

- a. FOURNIER, E. P., 1940.—“*Dictyocaulus filaria* y *dictyocaulosis ovina*. (Bronquitis y bronco-neumonía verminosa de los ovinos).” 22 (12), 44-52.
- b. MOSCONI, R. D. & ROCCA, J. B., 1940.—“Hidatidosis en el esternón en un bovino.” 22 (9/10), 469-472.

## 515—Revista de Medicina Veterinária. Lisboa.

- a. PEREIRA, J. G., 1940.—“Sobre o parasitismo intestinal do porco.” 35 (293), 72-75.

## 516—Revista Medico-Cirúrgica do Brasil.

- \*a. NORONHA, H. DE, 1940.—“Breve subsidio acerca da medicação antihelmintica específica.” 48, 561-566.

## 517—Revista Médico-Quirúrgica de Patología Femenina.

- a. ANGEL ETCHEVERRY, M., 1940.—“Fundamentos teóricos y experimentales para la preparación de nuevos antígenos lipídicos para el sero-diagnóstico de la hidatidosis.” 16 (1), 1-153.

(517a) Angel Etcheverry has examined various extracts of *Taenia saginata* with a view to their use in fixing complement in suspected hydatid. A substance capable of strong fixation can be extracted and is probably of a lipoid nature. The portion of the alcoholic extract which is insoluble in acetone contains most of the active antigenic lipoids. It has, however, neither anti-complementary nor haemolytic power. The portion soluble in acetone has these powers but is not suitable for use as an antigen for hydatid. The fraction soluble in ether has strong anti-complementary and haemolytic power but has no antigenic use. However, the

antigenic lipoids can be extracted with alcohol following treatment with ether in the cold. The addition of cholesterol increases the sensitivity of this extract. He suggests finally that such an alcoholic extract with added cholesterol should make a sensitive antigen for the diagnosis of hydatid by means of fixation of complement.

P.A.C.

## 518—Revista de Neuro-Psiquiatria.

- \*a. TRELLES, J. O. & LAZARTE, J., 1940.—“Cisticercosis cerebral; estudio clínico, histopatológico y parasitológico.” 3, 393-511.

## 519—Revista de la Policlínica Caracas.

- \*a. VALENCIA PARPARCÉN, J., 1940.—“La estadística en la clínica de la schistosomiasis mansoni digestiva.” 9, 3447-3466.
- \*b. PEREZ GALDÓS, I., 1940.—“Asma bronquial y parasitos intestinales.” 9, 3493-3500.

## 520—Revista de Sanidad y Asistencia Social.

- a. BASTERRECHEA, L. DE, 1940.—“Contribución al estudio de la cisticercosis porcina en Venezuela.” 5 (3), 412-424. [English & French summaries p. 424.]
- b. BAUMEISTER, A., 1940.—“Un caso de botrioccephalosis?” 5 (3), 457-459. [English & French summaries p. 459.]
- c. MENDOZA, M. A., 1940.—“A propósito de seis casos de Cisticercos bovis encontrados en animales sacrificados en los mataderos dependientes del Distrito Federal.” 5 (3), 471-480. [English & French summaries pp. 478-480.]
- d. MENDOZA, M. A., 1940.—“Lo que debe saber un inspector de carnes.” 5 (3), 542-616. [English & French summaries pp. 615-616.]

(520a) Basterrechea reports that, of 7,564 pigs undergoing meat inspection in Venezuela in the 3 months September to November 1939, 310 (4.09%) were found infested with cysticercus—71 of them heavily. The method of examining the tongue during life is useless, only 5 of the 310 having cysts in that organ. Most commonly infested are the muscles of the scapular region, masseters, cervical muscles, diaphragm and intercostals, in that order. Temperatures between 1° and 4° C. are lethal within 4 weeks. Prophylaxis requires co-operation between veterinary and human medicine. B.G.P.

(520b) Finding tapeworm larvae in a marine fish, *Sphraena picuda*, Baumeister wonders whether it may be: (i) *Dipyllobothrium latum*, and/or (ii) the causal agent of the “ciguatera” jaundice ascribed to this fish. B.G.P.

(520c) Mendoza reports 6 cases of *Cysticercus bovis* out of over 9,000 cattle examined in Caracas. B.G.P.

(520d) In his outline “What a meat inspector should know” (in 11 lessons), Mendoza deals briefly with the more important parasites met with (pp. 568-582). B.G.P.

## 521—Revue Médicale Française d'Extrême-Orient.

- a. GALLIARD, H. & NGU, D. v., 1940.—“Quelques trématodes parasites des animaux domestiques au Tonkin.” 18 (3), 131-134.
- b. TOUMANOFF, C., 1940.—“Les ‘black spores’ de Ross et la ‘dégénérescence brune’ des microfilaires chez les moustiques, conception nouvelle sur leur nature et origine possibles. Considérations sur la ‘chitinisation’ défensive chez les insectes.” 18 (4/5), 173-197.

(521a) Galliard & Ngu state that although *Fasciolopsis buski* is common in pigs in Tonkin and in about 12% in Hanoi it has scarcely ever been recorded from man in Indo-China, and in the cases noted the infection has been very light. It is suggested that the porcine and human infestations belong to different biological races. A single case of *Echinostoma revolutum* and one case of *Heterophyes heterophyes* are recorded from the cat. Probably these small trematodes have hitherto been overlooked. R.T.L.

(521b) Toumanoff considers that the “Black Spores” of Ross, found typically in the stomach wall and salivary glands of certain mosquitoes, and the “Brown Degeneration” of microfilariae within certain mosquitoes represent a melanic pigment deposited in degenerate malarial sporocysts and in dead microfilariae respectively. Both of these phenomena have been

described as foci of chitinization, representing a defence mechanism against foreign bodies on the part of the insect; Toumanoff doubts whether there is any evidence at all for such a defence mechanism.

B.G.P.

### 522—Revue de Microbiologie, d'Épidémiologie et de Parasitologie.

- \*a. LONGINOV, A. N. & LONGINOVA, A. V., 1940.—[Snow cover as an epidemiologic factor in trichocephaliasis.] **19**, 168-173.

### 523—Revue Suisse de Zoologie.

- a. JOYEUX, C. & BAER, J. G., 1940.—“Sur quelques cestodes.” **47** (4), 381-388.
- (523a) Joyeux & Baer redescribe *Choanotaenia marchali*, *Hymenolepis annandalei*, and *H. recurvirostrae* from new material. As a result, the variety *H. recurvirostrae* var. *magnosacco* Joyeux, Baer & Martin, 1936, is seen to be a distinct species for which the new name *H. tsengi* is proposed. They also redescribe the cysticercus of *Taenia lyncis* (previously recorded from North American deer) from *Rusa unicolor* in Indo-China.

B.G.P.

### 524—Riforma Medica.

- \*a. ORLANDINI, P., 1940.—“Elmintiasi e sindrome beriberica.” **56**, 646-648.
- \*b. SCARAVELLI, C., 1940.—“Rara sindrome addominale acuta da torsione di cisti dell'omento in bambina di sei anni.” **56**, 1130-1135.
- \*c. SCAFFIDI, Jr., V., 1940.—“Sulla frequenza della eosinofilia ematica nelle elmintiasi intestinali.” **56**, 1253-1256.
- \*d. PISACANE, C., 1940.—“Su di un caso di bilharziosi vescicale da *Schistosoma mansoni* in soggetto con uretrite post-gonococcica.” **56**, 1594-1599.

### 525—Rinascenza Medica.

- \*a. TIMPANO, P., 1940.—“L'anchilostomiasi nella provincia di Reggio Calabria.” **17**, 249-250.
- \*b. NISTICÓ, G., 1940.—“Strano caso di fuoriuscita di ascaridi attraverso l'uretra.” **17**, 559-560.

### 526—Rivista de Clinica Pediatrica.

- \*a. INGLESSI, E., 1940.—“Sulla frequenza dei parassiti intestinali nei bambini della città di Atene.” **38**, 685-695.

### 527—Rivista di Parassitologia.

- \*a. BISBOCCI, G., 1940.—“*Cysticercus cellulosae* Rud. nel cuore di un cane.” **4**, 117-124.
- \*b. PAVLOV, P., 1940.—“Ricerche sperimentali sulla trichinelosi dei volatili.” **4**, 175-187.
- \*c. PAVLOV, P., 1940.—“Elminti intestinali di volatili selvaggi in Bulgaria.” **4**, p. 278.

(527c) Among helminths recovered from wild birds in Bulgaria, reported on by Pavlov, *Centrorhynchus bipartitus* from the jackdaw and magpie, and *Mediorhynchus micracanthi* from the house-sparrow are new host records. *Acuaria laticeps* was found in a 42-day-old sparrow-hawk. [From an abstract in *Dtsch. tierärztl. Wschr.*, **49**, 580-581.]

A.E.F.

### 528—Rocky Mountain Medical Journal.

- a. SAWYER, K. C., LIGGETT, R. S. & DAY, H. W., 1940.—“Trichinosis from a clinical standpoint.” **37** (12), 984-986.

### 529—Röntgenpraxis.

- \*a. PÜTZ, T., 1940.—“Zur röntgenologischen Diagnose und Differentialdiagnose solitärer, verkalkter intrathorakaler Tumoren.” **12**, 266-273.
- \*b. HEEREN, J. G. & UTZ, F., 1940.—“Zur Röntgendiagnose des infiltrierend wachsenden Leberechinokokkus.” **12**, 342-346.

### 530—Saikinguo Zasshi.

- \*a. KUROKOCHI, T., NAGAI, I. & ENDO, T., 1940.—[Comparison of the ova-concentrating and smear methods for the faecal diagnosis of helminths. On an undetermined trematode ovum occasionally found by faecal examination.] **No. 533**, 11-15.

(530a) Though the ova-concentrating method was generally better than the smear method, the former was not suitable for the detection of unfertilized ova of *Ascaris*. In samples of human faeces, the authors found an unknown trematode ovum which is supposed to have come from fish consumed. [From Biol. Abs., 14, Abstract No. 16903.]

R.T.L.

### 531—Scientific Monthly.

- a. SCHWARTZ, B., 1940.—“The trichinosis situation in the United States.” 51 (3), 241-247.

(531a) Reviewing trichinosis in the U.S.A., Schwartz states that between 1898 and 1906, when Trichina inspection was compulsory for exported pork products, 1.5% of over 8 million pigs were found infested with living larvae, and a further 1% with dead larvae. Between 1933 and 1938 the digestion method showed that 0.95% of 13,000 farm-raised pigs and 5.7% of 10,500 garbage-fed pigs were infested. (The combined percentage, again 1.5, would have been much lower by the older direct microscopic method.) Adequate cooking of raw products is urged, and also the Federal methods of processing products which require no further cooking. Garbage containing meat scraps is plainly the main source of infestation. Diagnostic skin tests for pigs are not yet satisfactory.

B.G.P.

### 532—Semana Médica.

- a. HUARQUE FALCÓN, J., 1940.—“La anquilostomiasis como enfermedad endémica en el sur de EE. UU. de Norteamérica.” Año 47, 1 (19), 1135-1141.  
 b. JAROSLAVSKY, L. & BLUMENFELD, I., 1940.—“Hidatidosis peritoneal primitiva calcificada.” Año 47, 1 (19), 1147-1152.  
 \*c. AGUILAR, H. & HALPERIN, A., 1940.—“Pionemoquiste hidatídico de pulmón; tratamiento broncoscópico.” Año 47, 2, 401-404.  
 d. BALADO, M. & PRADO, J. M., 1940.—“Sobre membranas quísticas intraventriculares.” Año 47, 2 (40), 733-740.  
 e. JOUAN, S., 1940.—“Vómica hidatídica simulando laringitis tuberculosa.” Año 47, 2 (40), 769-770.  
 f. RIVERO ROGE, E., 1940.—“A propósito del tubaje duodenal en la distomatosis por *Fasciola hepática*.” Año 47, 2 (48), 1246-1247.  
 g. AGUILAR, H. & HALPERIN, A., 1940.—“Quiste hidatídico de pulmón; pleura libre. Operación de Posadas.” Año 47, 2 (51), 1397-1400.

### 533—Sinensis. Contributions from the Metropolitan Museum of Natural History.

- a. WU, H. W. & LIU, C. K., 1940.—“Helminthological notes, II.” 11 (5/6), 397-406.

(533a) Wu & Liu deal with 7 species of nematodes collected in Kwangsi and Szechuan. *Rhabdias annulosa* was recovered from 3 species of snakes; *Trichuris trichiura* from a pig; *Spinostromyulus sinensis* n. sp. from a bat; *Metastrongylus apri* from young pigs; *Heterakis longecaudata* from the partridge, *Francholinus* sp.; *Physalopteroides dryophisi* n.g., n. sp. from the snake, *Dryophis prasinus*; and *Physaloptera* sp. from *Japalura* sp.

A.E.F.

### 534—Southern Medicine and Surgery.

- \*a. ORMANDY, L., 1940.—“Gangrenous perforated appendicitis with *Ascaris lumbricoides*.” 102, 707-708.

### 535—Southwestern Sheep and Goat Raiser.

- a. BOUGHTON, I. B., 1940.—“Phenothiazine for stomach worms of sheep and goats.” 11 (3), 32-33.

(535a) Boughton claims that phenothiazine at 0.3 g. per lb. body-weight is highly effective against stomach worms in sheep and goats, as judged by clinical condition and egg-counts [no data are given]. He uses Bentonite as a wetting agent, mixing 20 g.<sup>1</sup> with one quart of water, adding this to 1920 g. phenothiazine powder, and subsequently making up to 1 gallon. He gives 1 oz. to lambs and 2 oz. to sheep. A single test suggests that 0.1 g. per lb. is sufficient if made up with 1% CuSO<sub>4</sub> instead of plain water.

B.G.P.

<sup>1</sup> Boughton in lit. has corrected this to “4 oz.”

## 536—Sovetskaya Meditsina.

- \*a. EIGORT, Y. M., 1940.—[A case of renal echinococcosis.] 4 (12), p. 25. [In Russian.]
- b. GARBUZOVA-SHUBENKO, I. N., 1940.—[A case of ascariasis of the liver and pancreas.] 4 (18), 28-29. [In Russian.]
- c. KUZHELEV, V. P., 1940.—[Sudden death due to the perforation of the intestinal wall by Ascaris.] 4 (18), 29-30. [In Russian.]
- d. EBOUSOVA, O. I. & GOLDINER, R. L., 1940.—[The incidence and therapy of helminthiasis in children.] 4 (19), 20-22. [In Russian.]
- \*e. SMIRNOV, I. I., 1940.—[Administration of quinine-alcohol solution by means of duodenal sound in the therapy of tapeworm infection.] 4 (20), p. 30. [In Russian.]
- \*f. PLOTNIKOV, N. N., 1940.—[Opisthorchiasis and its causative agent.] 4 (20), 30-31. [In Russian.]
- \*g. GERSHTEYN, O. S., 1940.—[Oil of chenopodium in the therapy of ascariasis.] 4 (20), p. 32. [In Russian.]

## 537—Taiwan Igakkai Zassi.

- a. OHAMA, S., 1940.—“Observations on the disease of hookworm in Ligaki Island, Okinawa Prefecture. I. On its incidence and degree of infestation among children of the Kabira Primary School.” 39 (10), 1557-1567. [In Japanese: English summary p. 1567.]
- b. TOMITA, S., 1940.—“On the difference of infectivity of *S. papilliferus* and *S. fulleborni* upon dogs and monkeys.” 39 (10), 1649-1650. [In Japanese: English summary p. 1650.]
- c. KOBAYASHI, H., 1940.—“Supplementary study regarding the organization of *Microfilaria bancrofti*.” 39 (10), 1651-1659. [In Japanese: English summary pp. 1658-1659.]
- d. TOMITA, S., 1940.—“Experiment on the susceptibility of humans to infection by *Strongyloides fulleborni* and with *S. papilliferus*.” 39 (11), 1884-1885. [In Japanese: English summary p. 1885.]
- \*e. RO, M., 1940.—“On the results of faecal examination of Sekihai elementary school children in Hokuto District, Sitisei County, Taihoku Prefecture, and the efficacy of santonin on ascaridiasis.” 39 (12), 1983-1984.

(537b) Tomita found that *Strongyloides papilliferus* from pigs was incapable of infecting dogs or monkeys. *S. fulleborni* from monkeys gave rise to slight and temporary infestations in dogs.

W.P.R.

(537c) In histological studies on the microfilaria of *F. bancrofti*, Kobayashi finds that there are special primordial cells for various parts of the gut. For the anterior part of the oesophagus they are situated anterior to the nerve ring, for the posterior part at about the centre of the larva, and close behind are placed those for the mid-intestine. These cell groups can be distinguished easily by vital staining and by a modification of Giemsa's stain. The genital cell mass which lies on the ventral aspect near the primordial cells of the posterior part of the oesophagus and mid-intestine has no relationship with the G-cells.

R.T.L.

(537d) Tomita found that 3 men exposed to infection with *Strongyloides fulleborni* became infected, eggs first appearing in the faeces on the 16th, 23rd and 32nd day after exposure. *S. papilliferus* was not infective (3 cases).

W.P.R.

## 538—Technical Bulletin. Oklahoma Agricultural Experiment Station.

- a. HUGHES, R. C., 1940.—“The genus *Hymenolepis* Weinland 1858.” No. 8, 42 pp.

(538a) In this compendium, designed to form an introduction to the genus *Hymenolepis*, Hughes lists 320 species. 159 specific names, which for various reasons are invalid, are listed, and he has arranged a host catalogue in which the species are grouped according to the orders of their hosts. Finally he gives a bibliography of recent literature on the anatomy, taxonomy and life-history of the various species.

P.A.C.

## 539—Tierärztliche Rundschau.

- \*a. SCHMOCK, 1940.—“Tetrachlorkohlenstoff bei Wurmerkrankungen von Pferden und Fohlen.” 46 (38), p. 426.

(539a) Schmock gives details of a method for giving carbon tetrachloride against equine helminths which he has used with success over a number of years. The dosage is: carbon

tetrachloride, liquid paraffin  $\text{aa}$  50 to 120 [c.c.?] according to the age and weight of the horse. This is followed immediately by  $\frac{1}{2}$  to 1 dessertspoonful of radix gentianae as a stomachic. The treatment is repeated after 8 days. Toxic symptoms were never observed, but occasionally there was loss of appetite for a day or two. [From an abstract in *Berl. Münch. tierärztl. Wschr.*, 1941, p. 44.]

A.E.F.

### 540—*Transactiones Societatis Pathologicae Japonicae.*

- \*a. HAMANO, S., 1940.—[Research on so-called locus minoris resistentiae of rabbit infected with human ascaris.] 30, 317-320. [In Japanese.]

### 541—*Transactions of the American Fisheries Society.*

- \*a. HUNTER, III, G. W. & RANKIN, jr., J. S., 1940.—“Parasites of northern pike and pickerel.” 69, 268-272.

(541a) The parasitic fauna of *Esox lucius*, *E. niger* and *E. americanus* from a Connecticut lake was investigated. Two species of trematodes, 2 of tapeworms, and 1 each of roundworms, spiny-headed worms, protozoa and parasitic crustacea are reported. The fish from this Connecticut lake harbour fewer species of parasites than those examined from the waters of New York State. The differences may be correlated with changes occurring during the last glaciation. [From *Biol. Abs.*, 14, Abstract No. 16902.]

R.T.L.

### 542—*Transactions of the American Microscopical Society.*

- ODLAUG, T. O., 1940.—“Morphology and life history of the trematode, *Alaria intermedia*.” 59 (4), 490-510.
- LOEWEN, S. L., 1940.—“On some reptilian cestodes of the genus *Oochoristica* (Anoplocephalidae).” 59 (4), 511-518.
- SCHMIDT, F. L., 1940.—“A new cestode, *Cladotaenia oklahomensis*, from a hawk.” 59 (4), 519-522.
- MORGAN, B. B. & WALLER, E. F., 1940.—“Severe parasitism in a raccoon (*Procyon lotor* Linnaeus).” 59 (4), 523-527.

(542a) It is shown that four hosts are required for the completion of the life-cycle of *Alaria intermedia*, viz., *Planorbula armigera* or *Helisoma trivolvis*, *Rana pipiens* (tadpoles and adults), mice or rats, and finally cats or dogs. The presence of the mesocercaria in the kidneys of *Rana pipiens* seems to be correlated with the presence of tumours in these organs. Detailed descriptions of the various stages are given. The taxonomic relations and the pathology are discussed.

R.T.L.

(542b) In a revision of the genus *Oochoristica* 27 species, of which two are new, are listed by Loewen as parasitic in reptiles. The new species are (i) *O. bivitellobata* n. sp. from *Cnemidophorus sexlineatus*, unique in the character of the vitelline gland which is divided into two lobes, and (ii) *O. gracewileyae* n. sp. from *Crotalus atrox atrox*, which is by far the largest species yet described. The author points out that Meggitt (1927) gives an amphibian as one of the hosts of *O. fibrata* and that the error is repeated by Harwood (1932) in his discussion of *O. eumecis*.

R.T.L.

(542c) Schmidt describes *Cladotaenia oklahomensis* n. sp. from a red-tailed hawk, *Buteo jamaicensis*, in Oklahoma. It can be distinguished by the large size of all parts of the scolex, by the long uterus and numerous uterine diverticula. In the mature segment there are from 17 to 23 short alveolar diverticula on each side of the main stem of the uterus. This development differentiates it from probably all other species of this genus.

P.A.C.

(542d) Over 300 immature *Mesocestoides*, probably *M. lineatus*, approximately 200 *Fibricola crateri*, one immature female *Physaloptera* sp. inq. and *Ascaris columnaris* in abundance were collected from a raccoon (*Procyon lotor lotor*) from Clayton County, Iowa, U.S.A.

R.T.L.

## 543—Transactions of the Kansas Academy of Science.

- a. CASE, A. A. & ACKERT, J. E., 1940.—“New intermediate hosts of fowl cestodes.” **43**, 393-396.
- b. EDGAR, S. A., 1940.—“Artificial evagination of larval tapeworms.” **43**, 397-399.
- c. LEONARD, A. B. & LEONARD, A. E., 1940.—“The cellular proliferation associated with Cysticercus infestations in the cottontail rabbit.” **43**, 429-432.
- d. WHEATLEY, M. D., 1940.—“The effect of various disintegration products of trichina tissue on the developing larvae of *Trichinella spiralis*.” **43**, 483-489.

(543a) Case & Ackert have used the following beetles experimentally as vectors for fowl cestodes. They are new records. *Raillietina cesticillus* is carried by *Discoderus parallelus*, *Pterostichus ventralis*, *Agonoderus comma*, *Anisodactylus harpaloides*, *Aphodius distinctus*, *A. cognatus* and *Alphitobius diaperinus*. *Lebia grandis* is reported as a vector for *Choanotaenia infundibulum*, and probably 6 species of ants for *R. tetragona*. They are *Solenopsis molesta*, *Crematogaster lineolata*, *Iridomyrmex pruinosus*, *Pheidole dentata*, *Crematogaster* sp. and *Prenolepis* sp. These ants carried off eggs of the cestode though no cysticercoids were actually found at post-mortem.

P.A.C.

(543b) Edgar has produced artificially the evagination of *Cysticercus pisiformis* in either normal saline, Ringer's solution, tap water or distilled water followed by a solution of bile salts, the preparation of which is described. Evagination usually occurred in a few minutes, but occasionally the larvae remained invaginated. Ringer and normal saline were the most satisfactory solutions and the presence of the larval bladder was not essential for the process.

P.A.C.

(543c) Leonard & Leonard find that there are two types of lesions associated with the liver stage of *Cysticercus pisiformis* infection in rabbits. Some were mainly fibrous tissue capsules containing dead or much stunted larvae. The second type of lesion was associated with inflammatory changes which suggest that the larvae were excreting toxic substances. There was round celled infiltration with giant cells, hypertrophy of the liver tissue and an incomplete development of the fibrous tissue capsule. This led to an encroachment of the lesion upon the normal hepatic tissues. They comment on the absence of tumours in rabbits as *T. crassicollis* i.e. rats secretes tumour forming substances. Rabbits, however, may be resistant to such substances when parasitized by larval cestodes.

P.A.C.

(543d) Wheatley's experiment shows that the disintegration products of trichina tissue formed by charring the larvae (sterile) over a Bunsen were lethal to developing *Trichinella* larvae *in vitro*, and the autolyzed products (not sterile) of trichina tissue were lethal both *in vitro* and *in vivo*. Sterilization or filtering through a Zeiss filter were found to inactivate the suspension of the disintegration products of *Trichinella* larvae. The experiment *in vitro* showed that antibody reaction is not necessary but that the disintegration products themselves are lethal to developing larvae of *Trichinella spiralis*.

M.R.Y.

## 544—Transactions of the Royal Society of South Australia.

- a. JOHNSTON, T. H. & SIMPSON, E. R., 1940.—“The anatomy and life history of the trematode, *Cyclocoelum jaenschi* n. sp.” **64** (2), 273-278.
- b. JOHNSTON, T. H. & ANGEL, L. M., 1940.—“Larval trematodes from Australian freshwater molluscs. Part VII.” **64** (2), 331-339.
- c. JOHNSTON, T. H. & MAWSON, P. M., 1940.—“Some nematodes parasitic in Australian freshwater fish.” **64** (2), 340-352.
- d. JOHNSTON, T. H. & MAWSON, P. M., 1940.—“Some filarial parasites of Australian birds.” **64** (2), 355-361.
- e. JOHNSTON, T. H. & MAWSON, P. M., 1940.—“A key to the nematode parasites of Australian marsupials and monotremes.” **64** (2), 363-370.
- f. JOHNSTON, T. H. & ANGEL, L. M., 1940.—“The morphology and life history of the trematode, *Dolichopera macalpini* Nicoll.” **64** (2), 376-387.

(544a) Johnston & Simpson describe *Cyclocoelum jaenschi* n. sp. from the air sacs of grebes (*Podiceps poliocephalus* and *P. novaehollandiae*) taken on the Lower Murray River. The egg contains a miracidium within which is an active redia which, in the intermediary *Ameria*

*pyramidata*, produces tailless cercariae which appear to encyst in the snail's tissues. Wittenberg's genus *Corpopyrum* and subgenus *Antepharyngeum* are suppressed. B.G.P.

(544b) Johnston & Angel describe and figure *Cercaria (Furcocercaria) trichofurcata* n. sp. from *Corbiculina angasi* and *C. (F.) tatei* n. sp. from *Plotiopsis tatei*, both in the Lower Murray River. The first, which does not encyst, is probably the larva of *Tandanicola bancrofti*; the second encysted in *Gambusia affinis* but the metacercaria failed to develop in a rat—it may be a *Cyathocotyle*. B.G.P.

(544c) Among the nematodes collected from fish in the Lower Murray River by Johnston & Mawson are the following new species: *Capillaria plectroplites* n. sp., *C. murrayensis* n. sp., *C. tandani* n. sp., *Goezia fluviatilis* n. sp., *Contracaecum macquariae* n. sp., *C. murrayense* n. sp., *Spinitectus plectroplites* n. sp., *S. percalates* n. sp., *S. bancrofti* n. sp., *Procamallanus murrayensis* n. sp., *Paraseuratum tandani* n.g., n. sp., *Rhabdochona jaenschi* n. sp., *Philometra plectroplites* n. sp., *P. percalates* n. sp., *Eustrongylides galaxias* n. sp., *E. gadopsis* nom. nov., and *Anguillilcola australiensis* n. sp. B.G.P.

(544d) Filarial worms collected from birds partly by Cleland, T. L. Bancroft and MacGillivray, and described by Johnston & Mawson include the following new species: *Hamatospiculum howense* n. sp., *Paralemdana clelandi* n.g., n. sp., *Astrofilaria vestibulata* n.g., n. sp., *Carinema dubia* n. sp., *C. graucalinum* n. sp., *Aprocota corvicolia* n. sp., *Pseudaprocta myzanthae* n. sp., *Diplotriaena alpha* n. sp., *D. beta* n. sp., *D. gamma* n. sp., *D. delta* n. sp., *D. epsilon* n. sp., and *D. zeta* n. sp. B.G.P.

(544e) Johnston & Mawson give a dichotomous key to the genera and species of nematodes, arranged in subfamilies, recorded from Australian marsupials and monotremes. There are 40 references. B.G.P.

(544f) Johnston & Angel redescribe *Dolichopera macalpini* from Australian snakes. The first intermediary is *Ameria pyramidata*, which (in spring only) eats the unhatched eggs. The sporocyst produces xiphidiocercariae which encyst in tadpoles. All stages up to the adult are described. Since this species is considered not congeneric with the type, *D. parvula*, they erect a new genus for it, *Dolichoperooides*, and a new subfamily, *Dolichoperoidinae*, for these two genera. B.G.P.

#### 545—Trudi Gorkovskovo Gosudarstvennovo Pedagogicheskovo Instituta M. Gorkovo.

- a. SOBOLEV, A. A., MASHKOV, V. V. & MASHKOV, N. V., 1940.—“A new trematode *Cyathocotyle desmanae* n. sp. parasitic in *Desmana moschata* L.” 5, 57-60. [In Russian English summary p. 60.]

(545a) Sobolev, Mashkov & Mashkov describe a new species of *Cyathocotyle*, *C. desmanae* n. sp., from the small intestine of the insectivore *Desmana* [Myogale] *moschata* from U.S.S.R. Closely related species differ in being found in anseriform birds, and it is distinguished by the relative size and position of the gonads. N.G.S.

#### 546—University of Santo Tomas Journal of Medicine.

- \*a. BARCELON-GUEVARA, A., CAVANNA, V. & SALIGUMBA, S., 1940.—“Some clinical considerations in schistosomiasis; treatment with tartar emetic.” 1, 55-68.

#### 547—Urologic and Cutaneous Review.

- a. STEVENS, A. R., 1940.—“Schistosomiasis infestation with involvement of the upper urinary tract. Report of patient with papillary epitheliomata of renal pelvis, ureter and later of bladder.” 44 (11), 681-685.

#### 548—Vestnik Oftalmologii.

- \*a. KRUTOVA, A. N., 1940.—[A case of subretinal cysticercosis in the region of the macula lutea.] 17, 146-148.

## 549—Vojno-Sanitetski Glasnik.

- a. TODOROVIĆ, K., 1940.—“Beitrag zur Kenntnis des klinischen Bildes der Trichinosis.” 11 (4), 605-615. [In Croatian: German summary pp. 4-5.]

## 550—Vrachebnoe Delo.

- a. SHULMAN, E. S., PARETSKAYA, M. S., ZATURENSKAYA, B. L. & BELOUS, A. A., 1940.—[Strongyloidiasis.] 22 (3), 201-208. [In Russian.]  
 b. LUBENSKAYA, I. M. & ROZENBERG, R. O., 1940.—[The problem of strongyloidiasis.] 22 (3), 217-220. [In Russian.]  
 c. IVANOV, A. A., 1940.—[*Opisthorchis felineus* infestation in man.] 22 (3), 219-220. [In Russian.]  
 d. REZNICHENKO, O. F., 1940.—[A case of hydatidosis of the skeletal muscles.] 22 (3), 225-226. [In Russian.]

(550a) Shulman and collaborators give a brief review of our knowledge of strongyloidiasis in man, illustrating their paper with a series of cases which have come under their observation at the Ukraine Institute for Medical Parasitology. A.E.F.

(550b) Lubenskaya & Rozenberg consider that strongyloidiasis is probably of greater importance in Russia than the comparative rarity of its diagnosis would suggest, and think that far more attention should be paid to it. Two cases of this disease are described. A.E.F.

## 551—Wasmann Collector.

- \*a. ROGERS, L. O. & KUNTZ, R. E., 1940.—“A new polystomatid monogenean fluke from a spadefoot.” 4 (2), 37-40.  
 \*b. HILL, W. C., 1940.—“The genus *Physaloptera* Rudolphi 1819 (Nematoda: Physalopteridae).” 4 (2), 60-70.

(551a) *Diplorchis americana* n. sp. is described from *Scaphiopus couchii* in Oklahoma. [From Biol. Abs., 15, Abstract No. 3766.] R.T.L.

(551b) One hundred and twenty species of *Physaloptera* are recognized as valid. Data are given on synonymy, number of uteri, host classification and distribution. Invalid specific names are indexed and an extensive bibliography of recent literature is added. The following new combinations appear, viz., *P. poicilometra*, *Scurocyrca bulbosa*, *S. ovata* and *S. excisa*. [From Biol. Abs., 15, Abstract No. 6774.] R.T.L.

## 552—Zeitschrift für Parasitenkunde.

- \*a. HEIDEGGER, E. & MENDHEIM, H., 1940.—“Beiträge zur Kenntnis der Gattung *Platynosomum*. II. Missbildungen bei *Platynosomum ventroplicatum* (Heidegger und Mendheim, 1937).” 11 (4), 435-456.  
 \*b. SZIDAT, L., 1940.—“Die Parasitenfauna des weissen Storches und ihre Beziehungen zu Fragen der Ökologie, Phylogenie und der Urheimat der Storche.” 11 (4), 563-592.  
 \*c. JACOB, E., 1940.—“Wege der Zusammenarbeit von Ornithologie und Parasitenforschung.” 11 (4), 607-610.  
 d. SCHUURMANS STEKHoven, jr., J. H. & PICK, F., 1940.—“Zur Biologie des *Strongyloides stercoralis* Bayv und *Strongyloides simiae* Lü und Hoepli. Typische und atypische Bewegungen, insbesondere der filariiformen Larven.” 12 (1), 36-53.  
 e. SZIDAT, L., 1940.—“Über einen Trematoden aus der Bursa Fabricii des grauen Reiher, *Epithymus fuscicollis* Creplin 1837.” 12 (1), 54-64.  
 f. NEUHAUS, W., 1940.—“Parasitäre Kastration bei *Bithynia tentaculata*.” 12 (1), 65-77.  
 g. YAMAGUTI, S., 1940.—“Zur Entwicklungsgeschichte von *Cyathocotyle orientalis* Faust, 1921.” 12 (1), 78-83.  
 h. YAMAGUTI, S., 1940.—“Über den Infektionsmodus von *Diplorchis ranae* Ozaki, 1931.” 12 (1), 84-85.  
 i. EICHLER, W., 1940.—“Korrelationen in der Stammesentwicklung von Wirten und Parasiten.” 12 (1), p. 94.

(552a) The structural anomalies of trematodes are reviewed and a study is made of those in *Platynosomum ventroplicatum* from a cockatoo, *Cacatua sulfurea*. Twelve out of 92 worms

showed anomalies in the reproductive system (2 of these also in the excretory system and intestine) which included pathological changes, functional disturbances and atrophy. In addition, 57 worms had the ovary on the right and 35 on the left side. Anomalies may be due to abnormal hosts and also to the lowered specificity of worms under artificial conditions. [From Biol. Abs., 15, Abstract No. 9725.]

N.G.S.

(552b) Basing his conclusions on a comparative examination of the helminth and arthropod fauna of the storks *Ciconia ciconia*, *C. nigra* and the heron *Ardea cinerea*, Szidat considers that the original habitat of the storks was the southern margin of the palearctic region where their parasites were originally acquired, while the ancestral home of the herons was in South America. [From Biol. Abs., 15, Abstract No. 9732.]

R.T.L.

(552c) Comments are made on the helminthological material in Niethammer's *Handbuch der deutschen Vogelkunde*. The establishment of a special institute for research on bird parasites is suggested for collaboration between ornithologists and parasitologists. [From Biol. Abs., 15, Abstract No. 9691.]

R.T.L.

(552d) Schuurmans Stekhoven & Pick have studied the movements of the infective larvae of *Strongyloides stercoralis* and *S. simiae* in water, on and in agar, in acid, salt and disinfectant solutions. In water, movements were co-ordinated from functional points at the anterior and posterior ends of the worms, the anterior point serving to orientate the whole body. A central point was of importance during pendulum movement. The action of perforating the surface of agar, which is said to be similar to a host membrane, is described. Atypical movements, rolling, stretching, etc., in the chemical solutions are noted. It is considered that the larval sheath serves to protect the worms from chemicals (particularly hydrochloric acid) and desiccation. Calcium salts were found to be the most practical toxic agents against the fourth-stage larvae.

W.P.R.

(552e) Szidat has found in the bursa fabricii of a grey heron (*Ardea cinerea*), shot on the Kurische Nehrung, 8 specimens of *Episthmium bursicola* (Creplin, 1837). This parasite had not been reported in Germany since its discovery by Creplin. Szidat reviews the genus *Episthmium* and concludes (contrary to Odhner) that it is valid. He emends the diagnosis of the genus, and gives brief descriptions of its 6 species.

A.E.F.

(552g) Yamaguti has worked out experimentally the life-history of *Cyathocotyle orientalis*. Fresh-water fish, *Pseudorasbora parva*, were infected with bifurcate cercariae from *Bulimus striatulus japonicus*. A kite, *Milvus migrans lineatus*, was fed with the fish and 80 hours later adult *Cyathocotyle orientalis* were recovered. The various larval stages and the adult are described and illustrated.

A.E.F.

(552h) Yamaguti's experiments show that larvae of *Diplorchis ranae* may reach the urinary bladder of *Rana rugosa* directly without migrating through the alimentary canal. In the urinary bladder development is slow: one of two frogs exposed to infection at the same time showed larvae after 234 days, and the other, young adults after a further 86 days. Larvae do not reach maturity on the gills.

A.E.F.

(552i) Eichler discusses briefly the correlation between phylogeny of the host and that of its parasites. He formulates 2 rules: (i) Fahrenholz' Rule, "The relationships of host animals can usually be determined directly from the systematics of their permanent parasites"; and (ii) Szidat's Rule, "The relative phylogenetic age of the host animals can usually be determined directly from the degree of organization of their permanent parasites". A more detailed paper is promised.

A.E.F.

### 553—Zeitschrift für Wissenschaftliche Zoologie.

a. KRÜGER, F., 1940.—"Die Beziehung des Sauerstoffverbrauches zur Körperoberfläche beim Schweinespulwurm (*Ascaris lumbricoides*)."  
152 (4), 547-570.

(553a) Krüger found that the oxygen consumption, determined by Krüger's method [Z. vergl. Physiol., 1934, 21, 249-266] of 19 *Ascaris lumbricoides* kept in saline at 37° C. exposed to air, fell between 3.5 and 7.6 c.mm. per sq. cm. body surface area per 30 minutes (two results

far above these limits were obtained but the author considers them to be abnormal). A new method of determining body surface area is given but it was found that it could also be found by the use of Meeh's formula, 13.96 being the constant. The small range of oxygen consumption per unit area was due to reductions in the respiratory rate with increases in worm size. It is concluded that the results obtained constitute a special case of Needham's law on chemical heterogony in relation to animal growth.

W.P.R.

### 554—Zentralblatt für Chirurgie.

- \*a. SCHUL, J., 1940.—“ Beitrag zur Perforation des Meckel'schen Divertikels. Als gleichzeitiger Beitrag zu den chirurgischen Komplikationen durch Askariden.” 67, 1292-1297.

### 555—Zoologica. New York.

- NIGRELLI, R. F., 1940.—“ Two new species of trematodes from the deep sea scorpion fish, *Scorpaena madurensis* Cuv. & Val.” 25 (2), 263-268.
- OLSEN, O. W., 1940.—“ Two new species of trematodes (*Apharyngostrigea bilobata* : Strigeidae, and *Cathaemasia nycticoracis* : Echinostomidae) from herons, with a note on the occurrence of *Clinostomum campanulatum* (Rud.).” 25 (3), 323-328.
- NIGRELLI, R. F., 1940.—“ Mortality statistics for specimens in the New York Aquarium, 1939.” 25 (4), 525-552.

(555a) Two new trematodes, *Tubulovesicula madurensis* n. sp. and *Podocotyle atzi* n. sp., are described from the stomach and intestine respectively of *Scorpaena madurensis* which has been received in New York from the London Aquarium. The affinities of these worms is discussed and a key is given for the genus *Tubulovesicula* Yamaguti. N.G.S.

(555b) *Apharyngostrigea bilobata* n. sp. from the small intestine of *Nycticorax n. hoactli* and *Ardea h. herodias* is described: it differs from all other members of the genus (for which a key is given) by the markedly bilobed ovary. *Cathaemasia nycticoracis* n. sp. is also described from the small intestine of *N. n. hoactli*; a key for the genus *Cathaemasia* Looss shows that the new species differs in the absence of cuticular scales and other features from other members of the genus. *Clinostomum complanatum* was found in only one species of heron (*Nycticorax n. hoactli*), but Olsen also records it from a new host, *Phalacrocorax auritus auritus*. All these birds were caught in Minnesota. N.G.S.

(555c) Nigrelli lists the causes of death of about 1,600 fishes, reptiles and invertebrates which died in the New York Aquarium during 1939. It was found that trematodes caused the most virulent parasitic diseases, especially among fishes. A list of the parasites recovered is included in the paper: it contains 24 species of trematodes, 9 of cestodes and 2 nematodes, none of which are new. A.E.F.

### NON-PERIODICAL LITERATURE.

- 556—\*ALONSO, L. M., 1940.—“ Introducción al estudio de la equinococosis (biología y patología general).” Buenos Aires, 142 pp.
- 557—ANTHONY, D. J., 1940.—“ Diseases of the pig and its husbandry.” London, xi+272 pp. [Helminthiases, pp. 214-239.]
- 558—\*BELDING, D. L., 1940.—“ A textbook of clinical parasitology.” New York.
- 559—\*CABLE, R. M., 1940.—“ An illustrated laboratory manual of parasitology.” Minneapolis, v+108 pp.
- 560—CAMERON, T. W. M., 1940.—“ The parasites of man in temperate climates.” Toronto, xi+182 pp.
- 561—CHANDLER, A. C., 1940.—“ Introduction to parasitology, with special reference to the parasites of man.” New York, 6th edit., 698 pp.

562—CRAIG, C. F. & FAUST, E. C., 1940.—“Clinical parasitology.” Philadelphia, 2nd edit., 772 pp.

563—\*CSEMBA, J., 1940.—[Ueber die antiparasitäre Wirkung des Chenopodiumöls und seiner Bestandteile beim Schwein.] Dissertation, Budapest.

Csembo finds from experiments *in vitro*, and in 220 pigs, that fractions of chenopodium oil distilling over at high temperatures contain the antiparasitic component, the low-temperature fractions being slower in action than the oil itself. The commoner veterinary chenopodium remedies are insufficiently active. [From an abstract in *Berl. Münch. tierärztl. Wschr.*, 1941, p. 427.]

B.G.P.

564—\*GRAY, E., 1940.—“Diseases of poultry: their aetiology, diagnosis, treatment and control, with a section on the normal anatomy and physiology of the fowl.” London, 198 pp.

565—\*HATZKY, W., 1940.—“Beitrag zur Biologie, Haltung, Zucht und Bekämpfung der Leberegel-schnecke (*Galba truncatula*) und verwandter Schnecken. Infektionsversuche mit Leberegel-miracidien.” Dissertation, Hannover.

Hatzky finds that, although the optimum pH for limnaeid snails lies between 7 and 8, pH does not serve to differentiate habitats for the various species. Thus, although *L. truncatula* and *L. palustris* rarely occur together, the reason does not lie with pH, nor with the presence of so-called indicator plants specific to each. Development of *Fasciola* does not proceed beyond the redia stage in snails other than *L. truncatula*. Control is best achieved by drainage and by providing snail-free drinking-troughs. [From an abstract in *Zbl. Bakt.*, I. Abt. Ref., 140, p. 266.]

B.G.P.

566—\*HEMKER, H., 1940.—“Ein Beitrag zur Aetiologie der Sommerwunden.” Dissertation, Hannover.

Hemker states that summer sores, unevenly distributed in Germany, are found almost exclusively in army horses. In 270 house-flies caught in stables, 25 were infested with *Habronema*, mainly *H. muscae*. Histological preparations from 10 horses showed eosinophiles but no larvae. [From an abstract in *Zbl. Bakt.*, I. Abt. Ref., 140, p. 366.]

B.G.P.

567—\*HILL, R. B. & BENARROCH, E. I., 1940.—“Anquilostomiasis y paludismo en Venezuela.” Caracas, 204 pp.

568—\*HOFMANN, H., 1940.—“Untersuchungen über die Konstanz der Verhältnisse der Pferdestrongy-liden im Kot und Behandlungsversuche mit Allegan-Tafeln.” Dissertation, Hannover.

569—\*KADENATSII, A. N., 1940.—[Helminth parasites of fur and game animals in the Far East.] Thesis, Moscow.

570—\*KÖNIG, H., 1940.—“Hautreaktionen mit Spulwurm- und Strongylidenantigen bei Pferden.” Dissertation, Hannover.

König has shown that the intradermal test for ascarids and strongylids in horses is unsatisfactory. Many infected animals failed to give a positive reaction while some gave reactions when they carried no worms. Uninfected suckling foals all gave negative results. [From an abstract in *Dtsch. tierärztl. Wschr.*, 49, 471-472.]

P.A.C.

571—\*KOTLÁN, S., 1940.—[The pathology of temporary parasitism of the tissue by nematodes.] [A paper presented at the 9th Meeting of the Hungarian Pathological Society, Budapest, June 1940.] Budapest.

Kotlán states that heavy infections of pigs with infective *Oesophagostomum* larvae lead to pathological changes in the intestinal mucous membrane which resemble those seen in swine fever. He found this condition 3 days after he had artificially infected pigs with 20,000 to 40,000 larvae. It is concluded that heavy infection with *Oesophagostomum* is a predisposing factor in swine fever. [From an abstract in *Tierärztl. Rdsch.*, 47, p. 228.]

A.B.F.

- 572—\*LÓPEZ-NEYRA, C. R., 1940.—“Helmintiasis humanas.” Barcelona & Buenos Aires, 139 pp.  
573—\*LUTTER, H., 1940.—“Beitrag zur Diagnose und Biologie des Erregers des Hautblutens ungarischer Pferde.” Dissertation, Hannover.

Lutter found that 10 Hungarian horses were afflicted in summer with a mild bloody sweat accompanied by skin nodules in the shoulder region. Blood from the nodules and blood-clots, but not venous blood, contained eggs and larvae of *Parafilaria multipapillosa* in every case. Life-history experiments with various flies, daphnids, and copepods were unsuccessful. [From an abstract in *Dtsch. tierärztl. Wschr.*, 49, p. 471.]

B.G.P.

- 574—\*MATEVOSYAN, E. M., 1940.—[Cestode infestation of birds in the U.S.S.R.] Thesis, Moscow.  
575—\*NEIVA, C., 1940.—“Moléstias dos suínos.” São Paulo, 279 pp.  
576—\*REBRASSIER, R. E., 1940.—“The identification and life cycles of parasites affecting domestic animals.” Columbus, Ohio, 89 pp.  
577—\*WU, K., 1940.—“Schistosomiasis japonica among sheep and goats, with a review of the reservoir hosts from China.” Far Eastern Association of Tropical Medicine, Comptes-Rendus du Dixième Congrès, Hanoi, 1938, 2, 721-725.

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## NOTE.

In all indexes the reference is to the serial numbers and not to the pages. In the Indexes of Authors and Subjects numbers in bold type indicate abstracts and numbers in Roman type refer to title-only entries.

To save paper the Index of Periodicals has been omitted, and the Author Index has been compiled on a different system. There are no cross-references to show joint-authorship, but authors of joint papers are listed individually. Thus, the entries in the Author Index for a paper by "Brown, B., Jones, A. & Smith, J." would consist of the three separate entries, "Brown, B.", "Jones, A." and "Smith, J.".

In the Index of Subjects, alphabetization is under the first word (e.g., "*Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed: papers on the genus as such; papers on undefined species; papers on new and defined species, e.g.,

### *Capillaria*

- spp.
- *aerophila*
- *amarali* n. sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word and also under the name of the parasite or disease.

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## CORRIGENDA

Serial No.	(Title)	For "RAO, S. S." read "RAO, S. S. & MAPLESTONE, P.A."
22c	(Title)	For "ZATURENSKA YA, V.L." read "ZATURENSKAYA, B.L."
33b	(Title)	For "caecae" read "caeca"
91a	(Abstract)	Line 2 For "behind" read "from"
91a	(Abstract)	Line 3 For "Opocoelus" read "Opecoelus"
329a	(Abstract)	Line 11 For "Opocoelina" read "Opecoelina"
329a	(Abstract)	Line 13 For "Opocoelina" read "Opecoelina"